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THE MONTH

The Board of Inland Revenue has discovered that many rcign medicines" which, as such, are liable to duty are l in this country unstamped. The Board has therefore en steps to make known that this omission must now be tified. A list is printed elsewhere which enumerates tain medicines declared liable, and it must be understood t those named are merely specimens of what are to be considered. In an editorial note we have mentioned eral which are specially exempted.

The Pharmaceutical Council has appointed a Committee look into the Pharmacy Act with a view of suggesting provement. This investigation is ostensibly undertaken satisfy dissatisfaction outside. But the Council declined accept the practical suggestion made by Mr. Fairlie that report of the Committee should be ready by December, ough it is obvious that if any advantage is to be taken its deliberations in the next session of Parliament, the ort must be ready during that month at the latest.

even annuitants will be elected on the Pharmaceutical evolent Fund in December next, a larger number than ever before been added at any single election, and king 30 in all.

very curious case is reported from Spalding. A firm of mists being summoned for not fully entering into the oison-book" a sale of vermin-killer, the date of sale (it alleged) having been omitted, the solicitor for the defence contended with much skilful argument that the chemists were not required to produce their books. The law, he said, required them to make the entry, but they might destroy the same the next minute if they so pleased. The magistrates were evidently fogged, and they consequently faced both ways—over-ruling the solicitor's objections, but dismissing the summons.

The Paris Exhibition awards, which will not be officially published until October 21, are nevertheless pretty generally known. It must not, however, be taken that the list which we print on another page is an absolutely accurate one. It is as nearly so as we can make it, so far as it goes, and in connection with the trades which it is our duty to report; but it is certainly incomplete, and may be defective in one or two instances.

In our report of the proceedings of the Pharmaceutical Society of Ireland will be found the copy of an important document which was read to the Council at its last meeting. It is a series of opinions obtained from an eminent Irish Q.C. The question of most moment refers to the exercise of the functions of the chemist and druggist by cooperative and limited liability stores. Mr. Purcell gives a very definite answer, expressing his opinion that such practice is illegal in Ireland. We do not know in what respect Irish law differs from English on this point.

The chloroform controversy is not yet quite exhausted. Messrs. Dunn & Co. fire a parting shot, but they refuse to accept Messrs. Macfarlan's challenge as it is made.

At a meeting of the Executive Committee of the British Pharmaceutical Conference, held a few days ago, the subject of the "shunting" of the paper on Chloroform, to which we directed attention last month, was brought forward by Dr. Symes. An explanation was given by the President, which, however, misses the point. It is a fact that it was not to the interest of certain wholesale dealers in chloroform that such a discussion should have been raised. We desired that the British Pharmaceutical Conference should have made it quite clear that in (practically) preventing the discussion no influence from such quarters had been exercised.

The Inaugural Address to the students of the School of Pharmacy was delivered on the evening of Wednesday, October 2, by Mr. Octavius Corder, of Norwich.

Two cases of death after taking chlorodyne are recorded in our local reports. One at Edinburgh seems to have been due to the medicine, but that at Dublin, in spite of the doctors' verdict, seems more likely to have resulted from heart disease.

We notice that Mr. Henry George King, the "wholesale druggist" of Kingsland, whose arsenical violet powder lately acquired so much notoriety, figures among the persons whose estates are in liquidation.

A proposal is made by Messrs. Broad of Hornsey, Hampson of London, and Gostling of Diss to raise a fund sufficient to offer a handsome prize for an essay on the separation of medical and pharmaceutical functions. Particulars are given in our advertisement pages.

The Chemists' Assistants' Association (London) has opened its second session in new rooms, in George Street, Hanover Square, with every promise of success.

Notices have been issued of the annual meeting of the Mineral Water Trade Association in London, on October 22. In connection with this an exhibition of aërated-water machinery and appliances will be held at the Agricultural Hall on October 22, 23, and 24.

Pharmacalia.

THE opening of the Educational Session affords an opportunity of sketching briefly the foundation and development of the present pharmaceutical school. It was in the year 1842 that lectures were instituted on Chemistry, Chemical Physics, Pharmacy, Botany, and Materia Medica. It so happened that this first syllabus was interpreted by exceedingly able men. Botany was entrusted to Dr. Anthony Todd Thomson, laborious as a writer, a physician, and a lecturer. Chemistry fell to the lot of Mr. George Fownes, whose works have literally followed him: and Pharmacy, to the personal advantage of the students, was explained practically and theoretically by the Professor whom we have still the happiness to number amongst us.

All these lectures had an element of novelty—every one of them was made to bear on the business of pharmacy—a point which broadly marked them off from instruction that might be derived respecting similar subjects at the hospitals or elsewhere. Then the whole circumstances of the case were new: a respectable body of individuals were bent on making an advance—they were not content, rather, they were very much discontented, with things as they were and had been, and they knew that the secret of real progress lay in the acquisition of sound knowledge. Hence this earlier period was stamped with a certain degree of enthusiasm, shared alike by the teachers and the taught, which led to the most fortunate results. Just at the time came Jonathan Pereira, who began to treat upon materia medica in a way in which that once dry subject had never before been attempted. In 1844 a laboratory was opened for instruction in practical chemistry. The students were assiduous, the professors were satisfied; but the Council were sorely tried with the financial bearings of the undertaking. Viewed as a commercial speculation it was a loss, as the receipts were not in keeping with the expenditure. Still it was resolved to persevere and to accept the task of pharmaceutical education as a duty. Had they thought otherwise pharmacy in this country would have had to be carried on by some other agency.

It may be as well here to recount the exact position of affairs. The laboratory was originally on the ground-floor, most euphoniously described in the reports as being on the basement story. To be strictly truthful, it was situated in the cellars of what had once been the mansion of a nobleman. It was badly lighted and badly ventilated, but to make amends it was amply provided with smells of every possible description. The subterranean hall of science revealed its existence to many an irate councillor upstairs by potent fumes in which sulphuretted hydrogen could be recognised with ease. Yet it was an excellent laboratory notwithstanding, and it was the first and only place then in London where the manipulations of pharmacy could be systematically studied. A disastrous interregnum of litigation and ill-feeling for a space injured the prospects of the society. Men's minds were diverted from the legitimate interests of pharmacy, and were absorbed in internal disputes. The cloud rolled away, and when harmony was restored, attention was directed more than ever towards the School of Pharmacy. By the year 1860 the previous arrangements were found to be utterly inadequate; various proposals were submitted to afford larger accommodation to every department. When every other project had failed it was decided to make a bold venture, and to put the laboratory on the top of the premises occupied by the society. The entire block of building belonging to the original mansion was just then for disposal, and thus, not only a handsome and commodious erection was substituted for the former inconvenient structure, but it was as effectually moved *out* of the house as if it had been situated in a neighbouring street. The united laboratories are fitted up with every adjunct for the study of the principles of chemistry by personal experiment. They are lofty, perfectly lighted, with abundant space, and thoroughly well furnished.

⁂

Very hot was the night, and very crowded was the lecture-room, when Pharmacy re-assembled on Wednesday, October 2, to see the prizes given; to hear our three professors read their several reports, and to listen to the address to the students by Mr. Octavius Corder.

There was an excellent gathering, the successful candidates being warmly greeted. Mr. John Williams, the president, was in his most genial mood, and often gracefully acquitted himself of saying something appropriate to each prizeman. Mr. Bremridge grows annually a trifle younger, and in a few years may be expected to come up for his Preliminary. Mr. Henry Allen got three silver medals and one bronze medal, besides other honours. The Pereira medal was awarded to Mr. John Graham Sangster, and the Herbarium chief medal fell to Mr. F. W. Edward Shrivell. Only 13 candidates competed for the Jacob Bell Memorial Scholarship, a fact which is incomprehensible.

Mr. Corder described certain varieties of plant and animal life, and gave a glowing account of the botanical treasures he had met with during the past summer in the Engadine. His concluding remarks to the students were remarkably well received. He exhorted them to study for the love of learning, and not with the sole object of passing an examination. A threefold duty had to be performed by the examiner—justice to the candidate, security to the public, and satisfaction to himself. With regard to temporal prosperity, he knew that the best life did not consist in abundance. "I have sufficient faith left," said the lecturer, "in honest endeavour to believe that a living may be obtained by fair trading, notwithstanding the lowering aspect of trade interests; surely not by keeping open shops an hour later than your neighbour, nor by cutting down fair prices; cheap physic, to say the least, has ever proved a failure and an abomination; the race has not yet come who will take double quantity because of a reduction in price, and cutting may appear to succeed for a time, yet the Nemesis will surely come and avenge herself on the offender. Life is real: see, therefore, that it be earnest. The journey can only be gone over once, therefore, let it be done well."

⁂

This time last year King's College, London, was in a state of much excitement; a rush of students, not altogether friendly nor quietly disposed, thronged both entrances of the lecture theatre to hear Professor Lister's first address. He brought with him a wonderful reputation and attracted a large audience of opponents and admirers. His place was occupied on Tuesday, October 1, by Professor A. H. Garrod, who delivered an extempore discourse. He gave a rapid sketch of the professional career of several medical men, pointing out the curious fact that the most brilliant and accomplished had not always been the most successful. 'Prodigy Young,' so named from his extraordinary linguistic skill, had but a moderate professional reputation, while men of lesser attainments succeeded better—as Sir Henry Holland, whose tact and courtly manners secured him a famous income; and Dr. Chambers, who once had the lion's share in London practice. This notice must be kept within due limits, otherwise we would point out the extreme unfairness of this line of thought if meant as argument.

lendid abilities even, outside pure medicine, are not likely be rewarded with large medical practice. Dr. Chambers d those who, like him, devoted themselves strictly to their n profession, were honoured, of necessity, with the nour due unto the physician. Professor Garrod passed an egant eulogium on the application of chloroform by Sir mes Simpson, and the introduction of the antiseptic system his own colleague, Professor Lister.

The Pharmaceutical Council.

HE only members of council absent from the October meeting on the 2nd inst. were Messrs. Hanbury and ackay.

The Benevolent Fund

ame on for consideration. The secretary stated that there ere at present 23 annuitants, two of whom were over 80 ears of age, seven over 70, ten over 60, and four over 50. Ir. Robbins moved that seven more should be added at the ext election. He said the subscriptions had about doubled nce five years ago. The secretary said that thirty annuitants ould absorb about 1,000*l.*, and the invested capital yielded nly about 540*l.* per annum. He hoped this statement would iduce the 600 persons who had subscribed last year but ad not yet done so this year to renew. The President said iere were about 600 new subscribers. Mr. Bottle said he as satisfied that seven annuitants could be elected without anger to the fund, but he mentioned, to show the need of ubscriptions, that six claimants would still be left—a larger umber of rejected candidates than on any previous occaion. Mr. Shaw then advocated the prohibition of canassing, urging, as he has done previously, that there was he danger that those who could afford to spend the most, nd therefore needed the annuities the least, were the most ikely to succeed. The Medical Benevolent College had ound that from 5*l.* to 30*l.* each was spent by the candidates r their friends; a section of its committee had determined to put a stop to canvassing, if possible. He hoped his society would do the same. Mr. Hampson sympathised vith Mr. Shaw, but he did not think it would be regular to pass such a resolution without notice. He mentioned that a possible candidate for an annuity had asked him to assist to obtain a grant to enable him to canvass. Mr. Savage considered the canvassing system bad, but feared it must continue, as otherwise persons would not take an interest in the fund. The President thought an article might be written against the system, but it would be too severe to stop it suddenly. Several other members spoke to the same effect, and the motion was not put. The motion for the election of seven annuitants was then carried unanimously.

The German Apotheker Verein

Had been visited by Dr. Paul and Mr. Greenish during their session at Coblentz recently. The latter made a short report of the proceedings. They had carried with them an introducion from the President, and had been very cordially received. Mr. Atkins desired to express his satisfaction that Mr. Greenish and Dr. Paul had gone to Coblentz to tender "this act of international courtesy." The Council then passed a resolution thanking the Apotheker Verein for their kindness to the two wanderers.

Possible Amendment of the Pharmacy Acts.

Mr. Bottle, according to notice, moved the appointment of a special committee to consider and report upon possible amendments to the Pharmacy Acts. This committee, he explained, would complete the work commenced by a similar committee appointed last year. He thought it best not to go into details; but the suggestions which the previous committee had made showed that there were amendments to be considered.

Mr. Atkins seconded the motion. There was a large amount of discontent, and he thought the Council should investigate the matter and do whatever could be done. They were charged with the due protection of pharmacy, and if they relegated the commission to other bodies they were neglecting their duty.

Mr. Sandford protested against the appointment of such a committee, believing it uncalled-for. He said it was keeping open a perpetual blister, and fomenting the discontent which Mr. Atkins had stated to exist. There was a danger, too, that, in going to Parliament in connection with any medical Bill, chemists might get under the control of the Medical Council, to which he, for one, should object. He remarked that the former committee had not been appointed by the Council, but was a sub-committee of the Parliamentary committee.

Mr. Hampson was glad that an old member of the Council, like Mr. Bottle, had taken up the subject. It was no use blinking the fact. Experience had shown that the Act was defective—not merely in minor details, but in some essentials; and if the Council did not take the matter up they would be neglecting their duty.

Mr. Schacht was not sure that association with the Medical Council would be so disadvantageous as Mr. Sandford had assumed. Pharmacy should aim to be recognised as a portion of the medical body.

Mr. Sandford had not intended to express any opposition to the Medical Council. He had meant that there should be independent government.

The President hoped a committee would not be formed unless something was to come of its deliberations. If it was to be a mere talking committee he hoped it would not be appointed. He thought, however, there were points on which improvement was required.

Mr. Woolley and Mr. Betty also advocated the appointment of a committee.

Mr. Fairlie proposed a rider, to the effect that the committee should report in December, with a view to taking the necessary steps to have a Bill introduced into Parliament next session.

Mr. Hampson seconded the motion, on the ground that it was desirable that something like a fixed time should be named when the report should be presented.

Mr. Fraser thought there would be much difference of opinion when they came to details, and perhaps they would come to the conclusion that it would be best to leave things as they were.

Much opposition was expressed in reference to Mr. Fairlie's motion, and Messrs. Churchill, Fairlie and Hampson only voted for it. Mr. Sandford spoke again, saying that it would be impossible to go to Parliament with any plea that the private interests of the trade were in danger. The former Act was obtained on the ground that it was for the public good. Mr. Bottle was confident that if the Council did not itself look into the working of the Pharmacy Act the country would appoint a Council that would. He would, however, rather lose his motion than have it passed with Mr. Fairlie's rider. Finally the motion for appointment of a committee was carried *nem. con.*, and the following gentlemen were appointed:—Messrs. Atkins, Betty, Bottle, Gostling, Greenish, Hampson, Mackay, Sandford, and Woolley.

The Pharmaceutical Society of Ireland.

AT the monthly meeting of the Council of the above Society the following was read to the members:—

Counsel's Opinion

Obtained by the Pharmaceutical Society of Ireland from T. A. Purcell, Esq., Q.C.

Can the Pharmaceutical Council itself prosecute persons infringing the Pharmacy Act of Ireland?

By the 4th section of the Pharmacy Act, 1875, *the Society is constituted a body corporate, and is empowered to sue and be sued by its corporate name. I am of opinion that it is quite competent for the Council, in the name of the Society, to prosecute for every violation of or infringement of the Act.*

Is it legal for a firm, consisting of two or more members, of whom only one is a qualified apothecary or pharmaceutical chemist, to compound poisons or medical prescriptions, or to sell poisons by retail, for the mutual profit of all the partners?

This question is intended to include co-operative and limited liability companies and societies of which a small number of the members or partners are qualified apothecaries or pharmaceutical chemists.

In my opinion it is not. The Act makes it unlawful for any unqualified person not only to sell, but also to keep open shop, for the retailing, dispensing, or compounding of poisons or medical prescriptions, and it does not cease to be unlawful for such unqualified persons to sell or keep open shop, because other persons, connected with them as partners, may be qualified to do so.

Can unqualified persons, other than those specified in the Act, legally act as pharmaceutical chemists, by employing hired qualified assistants to compound medical prescriptions and sell poisons for them?

I am clearly of opinion that they cannot, save in the case specially provided for by the 32nd section.

Can any persons other than qualified apothecaries and pharmaceutical chemists legally sell poisons by retail?

In my opinion they cannot.

Counsel will please advise as to the best mode of instituting and carrying out prosecutions under the Pharmacy Act of Ireland, and as to any particulars not included in the foregoing questions, concerning which he may consider it desirable to afford his advice to the Pharmaceutical Council.

The proper mode of proceeding will be by summons, in the name and at the suit of "The Pharmaceutical Society of Ireland," requiring the party to appear before one of the Divisional Magistrates (if in Dublin), or before the Justices at Petty Sessions (if in the country), to answer the charge of ——— (setting forth the ground of complaint). Of course, in any proceedings the Society must be represented by a solicitor. Nothing further suggests itself to me.

T. A. PURCELL.

71 Harcourt Street, August 17, 1878.

THE QUARTERLY EXAMINATION

For the licence to act as pharmaceutical chemists was held on Wednesday, October 2. Three candidates were examined. Two failed, the following passed:—William Lee, 6 Blessington Street, Dublin.

THE ANNUAL MEETING

Was held on Monday, October 7, the President in the chair. There was a small attendance of members, on account of the inclemency of the weather. The first business was the scrutiny of voting-papers for election on the Council, in place of the following retiring by rotation:—Dr. Collins, Mr. Hodgson, Dr. Hodges, Mr. Pring, Mr. Brunker, Dr. Ryan, and Dr. Macnamara; Dr. Macnamara had sent in his resignation. The following were elected:—Dr. Collins, Mr. Hodgson, Mr. Pring, Dr. Ryan, Mr. Brunker, Mr. Simpson, and Mr. Harrington. The following are the changes on the Council:—Mr. Harrington and Mr. Simpson in place of Dr. Macnamara resigned, and Dr. Hodges not re-elected. Dr. Hodges has not attended any of the meetings, Mr. Harrington was one of the foundation members. The next business was the election of officers for the year. All were unanimously re-elected; and it was resolved to add the treasurer's name to the finance committee.

The preliminary examination was held on Monday, Oct. 7. There were 12 candidates, of whom 11 passed.

British Pharmaceutical Conference.

MEETING of Executive Committee at 17 Bloomsbury Square, London, on Wednesday, October 2, 1878, at 10.15 a.m.

Present—Messrs. Schacht (President) in the chair; Williams (Vice-President), Attfield (Honorary Secretary), Carteighe, Greenish, and Symes.

The minutes of the previous meeting were read and confirmed.

Dr. Symes made inquiries respecting the omission at the annual meeting of the last subject mentioned in the programme [Mr. Mason's paper on chloroform].

The President replied that a member had desired to initiate a discussion on a matter which, though previously published, might elicit interesting remarks. A very large committee meeting had decided that, although it had not been the practice at Conference meetings to introduce discussions other than those following original papers, the particular subject referred to might be usefully introduced if there were time after the original papers had all been read, and the title was consequently ordered to be inserted at the end of the programme. There was not time; indeed, as it turned out, the original papers occupied more than the usual time, hence for that reason, and so far as he knew for that reason only, the author at his (the President's) suggestion withdrew the introduction to the discussion.

Several members of the Committee having confirmed the President's statement,

Dr. Symes inquired whether in the first edition of the programme the subject had not been announced as coming on earlier in the day.

The Honorary Secretary produced a copy of the first edition, which showed that the subject was announced at the end of the programme, as ordered by the Committee, and suggested that some one might have been misled into supposing that such a transposition had been effected by seeing a copy of a private proof, which at first contained the titles only in the rotation in which they had been received.

Mr. Greenish inquired what rule was followed respecting papers previously published?

The Honorary Secretary said that on the prefatory pages of the "Year-Book" they had always stated, as regarded subjects suggested by the Conference, that any facts discovered during an investigation might at once be communicated to any scientific society or scientific journal, the author being requested in that case to send an abstract or report on the subject to the annual meeting of the Conference.

Applications for grants of money to aid authors to defray the costs of materials in carrying out stated researches were received from Mr. Thresh, Mr. Gerrard with Dr. Senier and Dr. Wright.

Proposed by Mr. Carteighe, seconded by Mr. Greenish, and carried unanimously:—"That 10*l.* be placed at the disposal of Mr. Thresh for the purchase of materials for analysis of the rhizome of *Zingiber officinalis*, and a comparative examination of gingers of trade."

Proposed by Dr. Symes, seconded by Mr. Greenish, and carried unanimously:—"That 10*l.* be at the disposal of Mr. Gerrard and Dr. Senier for the purchase of the drug termed 'Pituri,' and for the materials for its pharmaceutical and chemical examination."

Proposed by Mr. Carteighe, seconded by Dr. Symes, and carried unanimously:—"That a grant of 20*l.* be placed at the disposal of Dr. Wright, towards the costs of the materials for an investigation of the active principle or principles of Japanese aconite, and that a similar sum be granted to Dr. Wright, under similar conditions, for an investigation of the active principles in the leaves and flowers of ordinary aconite."

Correspondence with members at Sheffield, the place of meeting of the Conference in 1879, having been read, a resolution proposed by Mr. Williams and seconded by Mr. Greenish, was carried unanimously, appointing Mr. W. Ward, F.C.S., of Sheffield, as a vice-president of the Conference, Mr. H. W. Malcham as local secretary, Mr. G. Ellinor as member of the Executive Committee, and Mr. G. A. Cubley auditor.

Letters from the editor of the "Year-Book" and from the printers were read reporting good progress in the preparation for press of the volume for 1878, Mr. Siebold suggesting that in future years some time might be saved if the MS. were sent to the printers as soon as finished, instead of being kept back for presentation at the annual meetings. Resolved:—"That the MS. of the 'Year-Book' be placed in the hands of the secretaries on or before the day of the annual meeting, and that they thereupon immediately summon the 'Year-Book' Committee to consider any matters which may arise respecting publication, &c."

Resolved:—"That the members of the 'Year-Book' Committee appointed last year be reappointed, with the addition of the President of the Conference."

Resolved:—"That Mr. Siebold be reappointed editor of the 'Year-Book' on terms similar to those of last year."

tesolved :—"That Professor Attfield be requested to edit
'Transactions of the Conference.'"
tesolved :—"That the names of the foregoing officers be
nted, as usual, on the back of the title-page of the forth-
ning 'Year-Book,'"
Professor Attfield reported the secretarial business done
ce the previous meeting of the Committee.

Chemists' Assistants' Association.

HE first annual meeting of the above Association was held
on Thursday, October 3, at its new rooms, 32A George
ect, Hanover Square.

The President, Mr. Wallis, on taking the chair, said that
ving in response to an appeal received donations from
ious sources, chiefly from wholesale firms, the Council had
en enabled to secure the excellent premises in which they
re then met, and which would be in future open every
ednesday at 8.30 P.M.

The following donations were then announced, in addition
those published last month :—Messrs. Hearon, Squire &
ancis, 3*l.* 3*s.*; Messrs. Flood & Co., 2*l.* 2*s.*; F. Barrow, Esq.
nnual), 1*l.* 1*s.*; Messrs. Wright, Layman & Umney (annual),
1*s.*; Messrs. Herrings & Co., 1*l.* 1*s.*

Mr. Wallis then read his inaugural address :—

He said: When the Association was formed many pro-
ccies were made as to its fate worthy of a gloomy char-
er. Some predicting that it would end in smoke, because
allowed an indulgence of the soothing weed on our social
enings; others, that it was of the nature of a trades-union;
d others, that it would degenerate into a grumbling society,
d that its time would be occupied in talking over the per-
nal affairs or private characters of our employers; fortu-
tely these predictions have met with the fate assigned to
r Association—they have ended in smoke; and at this, the
mmencement of our second winter session, we can look
th satisfaction upon the steady success which has attended
course. The promoters, principally young men, who had
en connected with some provincial association, felt
at something of the kind, if started in London, might
ove of great benefit to assistants of pharmacy, for upon
oking round it was seen that as a class we were in a very
plated position, and that the first step towards improving
r condition, both scientifically and socially, was to bring
together in some form of organisation. After detailing
e steps which had been taken in founding the Associa-
on, and acknowledging especially the interest which had
en taken in the idea by Mr. A. W. Postans, who presided
the preliminary meeting, Mr. Wallis said: At the end of
st session we numbered no less than sixty ordinary
d six honorary members, and, although the present session
s not long commenced, it is satisfactory to know that a
rge proportion of last year's members have already sent in
eir subscriptions, and that a considerable influx of new
embers is also anticipated. The present position of the
ssociation is, I think, highly satisfactory; the possession of
is excellent room, in such a central locality, is a circum-
ance upon which I must congratulate the members. We
art this session with our same indefatigable secretary, and
council composed of men possessing considerable scientific
tainments, and having a thorough knowledge of our busi-
ess and the peculiar circumstances of the chemist's assistant.
would here like to allude to the obligation we are under
those wholesale firms and all who have so kindly assisted
s with donations; and, as it may not be known to all
resent, I may state that Horace Dobell, Esq., M.D., has, in
ldition to a handsome donation, also presented the
ssociation with a copy of the whole of his valuable works,
hich, with some books since received from other
ources, will, I trust, form the nucleus of a useful library.
here are, no doubt, many ways in which the Association
ay develope its usefulness, but which may safely be left to
e judgment of the council. Our system of asking and
nswering queries respecting subjects connected with phar-
nacy, has proved eminently successful, and our worthy
ecretary informs me that he has provided a book in
hich to register the results and conclusions arrived at;
his will evidently prove of great service for future reference. I will not now take up your time by dwelling upon the many topics at present affecting our calling. I cannot, however, refrain from mentioning that this Association has viewed with pleasure the continued success of the Chemists and Druggists' Trade Association, believing it capable of fulfilling a most important sphere of usefulness in the much-needed protection of trade interests. In our parent society it is gratifying to notice the excellent development of their educational functions, although the amount of dissatisfaction one hears so often expressed, towards a society whose influence should be universal, is much to be regretted. No step that pharmacists as a body could take would tend more to elevate our position than a general shortening of the hours of business, for it must be patent to all that the present protracted ones are totally unnecessary, and, being beyond the public requirements, are consequently self-imposed. When this millennium of pharmacy arrives there is little doubt but that "cram" would to a very large extent disappear, and real study and research would be greatly promoted. Admitting these facts we all ought individually to favour this movement, already liberally carried out by some pharmacists, for the interests of employers and employed are identical. Sometimes we hear the objection that directly an assistant commences business he becomes an opponent of reasonable hours; this argument is only partially correct, and we assistants as a body would not advocate these views if we had such intentions, for it must be borne in mind that the majority of us have no desire to remain assistants to the end of our days." Mr. Wallis next advocated an effort to modify the Pharmacy Act so as to secure a greater monopoly in the sale of drugs for registered chemists. "If," he said, "it is to the interest of the public that we should have an intimate knowledge of the character of drugs and the various methods of detecting their adulteration before we are allowed to sell them, it then follows that it must also be for the 'public good' to prevent their sale, by persons not possessing this knowledge, which in our case is said to be such an absolute necessity. The desire of such a monopoly on the part of chemists is only just and natural, particularly as we have a precedent in the case of our continental neighbours, and I certainly think it a subject deserving the attention of the Pharmaceutical Council, who, by endeavouring to bring about such a desirable improvement, would give great satisfaction to a large number of their members.

After a discussion of some points in the above address, a vote of thanks was awarded to Mr. Wallis. The same recognition was given to the services of the Hon. Sec., Mr. E. Cardwell, and to the committee who had selected the new rooms. The meeting then terminated. A programme of meetings, with titles of papers to be read at them, has been issued, and may be had on application to the Hon. Secs., Mr. C. E. Stuart, 32A George Street, Hanover Square, and Mr. E. Cardwell, 92 Kirk Dale, Upper Sydenham.

Provincial Reports.

BARNSLEY.

Fraud on a Chemist.—On September 23, at Barnsley Town Hall, Thomas Fox Shepherd, stock and share broker, was charged that on May 1 last he unlawfully and knowingly, by a certain false pretence, did obtain from Frederick Billington, of Barnsley, druggist, a certain valuable security—to wit, a banker's cheque and order for payment of 101*l.*, and the sum of 12*l.* 6*s.* 3*d.* in money—with intent to defraud him of the same. In the beginning of May the prosecutor met the prisoner in the street, and asked him if he had any Caledonian Railway shares for sale. The prisoner said he had, and that he would call on him next morning. The prosecutor paid him 113*l.* 6*s.* 3*d.* for one share, but never received the scrip of it. Towards the latter end of May the prisoner absconded, and returned last month, when he wrote to the prosecutor to meet him and his creditors at his father's house. He did so. As he could neither get the scrip nor the money, he told the prisoner that if it was not forthcoming in two days he would take a warrant out, which he did. The prisoner was committed for trial to Leeds Assizes, bail being allowed.

Curious Poisoning Case. Emily Thresh, aged 3 years, the daughter of an eating-house keeper, and Henry Mason, 52, waiter, died on September 12, after eating some bread pudding. A prolonged investigation into the matter was made, with this result only, that no poison could be detected in the bodies or the pudding, nor had anything been discovered to account for the deaths. At the adjourned inquest, held on October 10, Mr. A. H. Allen, of Sheffield, stated that he had been quite unable to detect any poison in the pudding, and that it had failed to produce any bad effects in a puppy which was fed on it for two whole days. He read extracts from letters containing the opinions of the most generally-known public analysts, all of which pointed to fungoid growth as the cause of death. The bread of which the pudding had been made had been lying under the counter of the shop for an indefinite number of weeks in contact with all the other eating-house scraps, and was known to be mouldy. Several cases of poisoning by mouldy food were instanced by Mr. Allen and his correspondents. The jury, after considering their verdict for 10 minutes, gave it as their opinion "That the deceased, Emma Thresh and Henry Mason, came to their deaths from eating a portion of unwholesome pudding, but how and by what means such pudding became unwholesome there is not sufficient evidence to show."

BRADFORD.

Charge of Wilful Murder against a Herbalist.—On September 17, at the Bradford Police Court, Hezekiah Thornton was committed for trial, charged with the wilful murder of Margaret Allison, a widow, aged 24. It was alleged that he had feloniously used certain instruments upon her person with intent to procure abortion. The woman died a few days after.

Suicide of a Chemist's Apprentice.—Mr. Hutchinson, borough coroner, held an inquest at the Bradford Town Hall on Wednesday, September 26, to inquire into the death of John Harper, 15 years old, who was found insensible at six o'clock in the morning, in an old boiler on some waste ground in Parma Street, Manchester Road, and died at ten o'clock the same morning. The deceased was apprenticed with Mr. James Savage, chemist and druggist, Manchester Road. It appeared that the boy had been unwell lately, and the previous night had been reproved by his mother. After a short consultation the jury returned a verdict to the effect that the deceased committed suicide by taking laudanum while in a state of temporary insanity.

BRISTOL.

Theft of Citric Acid.—At the Bristol Police Court on October 1 George Edward Tate was charged with stealing a cask containing 156 lbs. of citric acid, value 16*l.*, the property of the Bristol Aërated Water Company. He had been employed as a sort of head man, or under-manager. Owing to circumstances that came to the knowledge of the manager, on August 16 several persons were keeping a look-out upon the actions of the accused. A bottler named James Rogers, in the employ of the company, discovered in a coach-house, where old casks and bottles were kept, a cask full of citric acid concealed beneath the empty casks. The manager was informed of the discovery, and the cask having been tested to ascertain its contents, it was marked. On the morning of August 17, while the manager was absent in town, the accused had the barrel removed on a pair of trucks to the Midland Railway station, addressed to "Mr. Brown, Bath, to await further orders." The police were then communicated with, and they found the cask of acid at the station, and took possession of it; but they were unable to meet with the accused, who got off to Liverpool, where he was ultimately apprehended. There were no other cases that could be traced against him, and he had hitherto borne a very good character for uprightness and honesty. He had a wife and two children, and had been in the employ of the company some years. He had originally been sent down to Bristol from London by two shareholders of the company, who believed they could place confidence in him. His wife, who was in court, said that since the affair had occurred, one of his children had died through grief. The prisoner pleaded guilty, and the magistrates sentenced him to three months' hard labour.

CARLISLE.

Theft from a Chemist.—Mr. Joseph Brown, chemist, of Armathwaite, was robbed of all his movables on August 7, while in a state of drunkenness in Botchergate. The alleged thieves—John Crum, William Fuller, and Charles Potter, labourers—were committed for trial at the next City quarter sessions. Crum was released on bail, himself in 50*l.*, and one surety in 50*l.*

CHESTERFIELD.

Fire. The chemical works belonging to Messrs. Bradley & Tyson, of Furnace Hill, Brampton, near Chesterfield, were partially destroyed by fire on September 17. The flames broke out in the charcoal house, and were not extinguished till about 300*l.* damage had been sustained. The loss is covered by insurance.

DUBLIN.

Death from an Overdose of Chlorodyne.—The *Irish Times* says that Mr. John West, of 2 Clareville, Grand Canal Bank, Harold's Cross, who had been an assistant to Dr. John Evans, of 49 Dawson Street, died suddenly at his residence on Tuesday night, after taking an overdose of chlorodyne. Mr. West, who was only twenty-seven years of age, had for some time past been complaining of pains in the chest and back, and he also suffered from a cough, yet he attended regularly to his business in Dawson Street. He returned home on the Tuesday at 7.30, went to bed, and partook of some gruel. About half-past 10 o'clock, having been seized with a fit of coughing, he asked his wife, who had been also in bed, to hand him the bottle of chlorodyne which was in the room. She did so, and after deceased had mixed a dose, he drank it, fell back into his wife's arms, and expired. Dr. Mitchell, of 59 South Richmond Street, and Dr. Evans, of 29 Molesworth Street, were immediately called in, but they could render no assistance—life was extinct. They expressed their opinion that death was the result of an overdose of chlorodyne, accidentally taken.

EDINBURGH.

Supposed Chlorodyne Poisoning.—Donald Gilchrist, of 12 Dalrymple Place, Edinburgh, died in the Royal Infirmary on October 2. He was in the habit of carrying about a phial of chlorodyne in his pocket, as he was subject to severe pains, and it is conjectured that on the previous night he had been seized with them in bed, and that he had taken a dose of the fluid, for in the morning he was noticed to be breathing heavily. He died in the course of the day.

The Edinburgh School of Pharmacy and Chemistry was opened for the winter session on October 1, and from the number of pupils from the North of England and various parts of Scotland who have applied for admission it is quite evident that this institution is increasing in popularity. Mr. J. A. Lyon, M.A., M.B., and C.M., Edin., has been appointed lecturer on botany at this school.

GATESHEAD.

A Disobedient Apprentice.—At the Gateshead County Police Court on September 10, Owen Weallens, an apprentice in the employ of Messrs. H. L. Pattinson & Co., chemical manufacturers, Felling, was ordered to pay 1*s.* damage, and 5*s.* the costs of the Court, for absenting himself from work without lawful excuse. The defendant, who had been several times before the Bench for refusing to work, said he would go to prison rather than follow his employment, as he had six miles to walk every day.

LIVERPOOL.

The Council of the Liverpool Chemists' Association will hold their annual *conversazione* at the Royal Institution on Thursday evening, the 7th proximo.

LEEDS.

Mr. Josiah Ruddock Joy, the "Working Man's Candidate," a manufacturing chemist, of Rockingham Street, in anticipation of the dissolution of Parliament, has come forward as a champion of Arthur Orton, otherwise Sir Roger chborne, and as working man's candidate for the represen- tion of Sheffield. A Mr. Robert Hogg is a Leeds herbalist, d is commonly known as "Dr." Hogg. "Dr." Hogg so seems to be devoted to the grand cause of liberty and stice as personified in the Claimant, and to be rather alous of the pretensions or successes of Mr. Joy. He con- quently wrote a letter to Mr. Hall, the secretary of the nd for the election expenses of Mr. Joy, in which he nounced that gentleman as a "wretch," as "one of the reatest liars and worst enemies Sir R. Tichborne ever had," d as "more fitted for prison than for Parliament." r. Joy answered the letter by a legal document, summon- g "Dr." Hogg to appear at the Leeds Police Court, on eptember 24, where he was charged with libel. The stipen- iary remarked that "Parliamentary candidates must expect few brushes down," and adjourned the case for a week to llow the defendant time to consider his line of defence. On ctober 1 the case was again called, and after the usual pre- iminaries of cross-examinations, "Dr." Hogg was committed or trial, bail being accepted. Mr. Josiah Ruddock Joy is egistered as a chemist and druggist in business before ugust 1, 1868.

LONDON.

FIRE.—On October 1 a fire broke out on the premises of Messrs. J. Rogers & Co., medical box turners, Carter Street, Walworth Road. A workshop was burnt out, and a quantity of timber in one of the store yards was severely damaged. The cause of the fire was unknown. We understand that Messrs. Rogers & Co. have secured temporary premises, and are able to execute orders as usual.

LONDON (CAMDEN TOWN).

ALLEGED UNQUALIFIED MEDICAL TREATMENT BY A CHEMIST.—George Dixon Myhill, aged 18, was a clerk at the Civil Service Stores, and resided with his parents at 31 College Street. On the evening of September 18 he spent two hours in the King Street Baths diving and swimming, and on Thursday (September 19) he went to Mr. William Sharp Evans, chemist, of 141 Great College Street, Camden Town, and procured some medicine for an ear-ache which had attacked him. Next morning he got worse, and complained of pains in the back of his head, and Evans came to see him. On the Saturday morning Evans came again, and the patient seemed so ill and in such pain that the father proposed to call in a doctor, but the chemist replied—"No; I do not see any fear of anything." Next morning the patient was worse, and his father went for a doctor, but his son died before his return. The *post mortem* revealed the fact that an abscess in the ear had broken, causing a rupture of the drum, and effusion in the base of the brain. These injuries might have been produced by prolonged immersion and frequent plunges in cold water. An inquest was held by Dr. Hardwicke on Tuesday, September 24, when inquiry was made for the chemist. He had disappeared since the Sunday. The jury returned a verdict in accordance with the medical testimony.

MACCLESFIELD.

EXTRAORDINARY MISADVENTURE.—On August 31 an inquest was held at the Infirmary, Macclesfield, on the body of Mary Challinor, who met her death on August 29 under the following unusual circumstances:—She had been ordered into the Infirmary, seven months previously, by Dr. Bland, to be treated for an affection of the knee-joint. On August 29 Dr. Bland states that he directed Dr. Cameron to inject into the joint a mixture of 1 drachm tinct. iodi. and 1 oz. water. Dr. Cameron states that the proportion was to be ½ oz. to ½ oz., and that he gave directions to the hospital dispenser to make up the mixture and send it to the female ward. The dispenser states that Dr. Cameron instructed him to make the injection, but said only that it was to be left on the counter; no directions were given as to labelling it with the patient's name or sending it to the female ward. A bottle of liniment of aconite and chloroform for another patient had been labelled, "The Injection. Rebecca Millar," as they had run out of liniment labels. The dispenser had to leave the Infirmary on the 29th on account of illness, and on his return on the 31st he found the iodine injection where he had left it on the counter. The hospital nurse had received orders to prepare everything for the operation, and amongst the other things placed the bottle of liniment labelled "Injection. Rebecca Millar." Dr. Cameron, when he performed the operation, took the bottle without noticing the labels further than to see that one label was red and the other white, and injected about 2 drachms of the aconite and chloroform into the joint, allowing it to escape after a short time. About three quarters of an hour after the operation bad symptoms began to appear, and within two hours the patient was dead. The verdict of the jury expressed a belief that there had been much carelessness, but did not attach the blame to anyone in particular.

ROTHERHAM.

SUPPOSED POISONING BY WINSLOW'S SOOTHING SYRUP.—On Sept. 6 an inquest was held at Rotherham on the body of Henrietta Jane Walker, aged seven months, who had died the day after taking half a teaspoonful of Mrs. Winslow's soothing syrup. Mr. Wm. Oxley, surgeon, Rotherham, had attended her on the day of her death, and believed that death had resulted from the administration of some narcotic. The inquest was adjourned to allow a *post-mortem* examination to be made. At the adjourned meeting Mr. Lyth, surgeon, stated that he had found all the organs of the body healthy, except the brain, which was highly congested, and had rather more serum at its base than is natural. This condition he asserted to be consistent with death either from a narcotic poison or from convulsions. A verdict to this effect was returned.

SHEFFIELD.

SELLING DETERIORATED SWEET SPIRITS OF NITRE.—Mr. William Sheldon, grocer, was recently summoned for unlawfully selling two ounces of sweet spirits of nitre, which was not of the nature, substance, and quality of the article demanded. Mr. A. H. Allen sent a certificate which stated that the sample was almost destitute of the real nitrous ether, which formed the most important constituent of "sweet spirits of nitre" and "spirit of nitrous ether" of good quality. The sample had not been watered. As a remedy it was useless. Mr. Allen appended to the certificate a statement that sweet spirits of nitre gradually deteriorated from decomposition and evaporation of the nitrous ether contained in it. In undiluted specimens this change occurred very slowly, extending over many months, and was rarely complete. Defendant stated that he sold the nitre precisely as he bought it from a Sheffield chemist, who declared it to be of good quality. Edwin Wiles, Mitchell Street, the chemist from whom the nitre was purchased, said it was entirely undiluted at his place. He bought it from a respectable house in York. The magistrates imposed a fine of 2*l.* and costs, pointing out to defendant that, as regarded the present case, it did not matter in what state it was when he bought it. If, however, he sold it under quality, he was liable to a penalty of 20*l.*—*Analyst.*

SUNDERLAND.

BURGLARY AT A CHEMIST'S.—On October 7 John Bailey was sent for trial at the Durham Sessions (which commence on October 14), on three separate charges of burglary. Numbers 1 and 2 were for breaking into a butcher's and a painter's; number 3 was, that on the night of September 30, he did feloniously break into the shop of Mr. Sharpe, chemist, Borough Road, Sunderland, and steal therefrom certain articles, to wit, three hair brushes, two combs, a large bath sponge, a quantity of soap, and some bottles of lime juice to the value of 6*l.* Mr. Sharpe closed his shop at eleven o'clock on September 30, and was roused at two o'clock on October 1 to find it broken open and the goods abstracted. Bailey was seen walking late at night with a heavily-laden carpet bag, and was stopped and searched by the police, who removed him to the lock-up.

WESTMORELAND.

PUBLIC ANALYST.—Mr. Louis Siebold, F.C.S., editor of the "Year-book of Pharmacy," has been appointed public analyst for the county at 21*s.* each analysis for the first 25, and 10*s.* 6*d.* each analysis beyond.

THE LIVERPOOL CHEMISTS' ASSOCIATION.

THE annual meeting of the 29th session was held at the Royal Institution, Colquitt Street, on September 27, President T. F. Abraham in the chair. The business was entirely of a formal character: the reports of the session being passed, the usual votes of thanks were accorded to the authors of papers and donors to the library and museum during the session.

The first general meeting of the 30th session was held at the Royal Institution on October 10, President T. F. Abraham in the chair. The Secretary announced that the following gentlemen constituted the Council of the Association for the present session:—President, T. F. Abraham; Vice-President, Charles Symes, Ph.D.; Treasurer, R. Sumner; and Messrs. J. Abraham, J. T. Armstrong, F.C.S., M. Conroy, F.C.S., E. Davies, F.C.S., A. H. Mason, F.C.S., A. Redford, J. Shaw, and J. Woodcock. Hon. Secretary, T. Williams, F.C.S., 23 Lord Street. Arrangements have been made for chemical lectures in connection with the School of Pharmacy by Mr. T. Williams, F.C.S., at 1 guinea per course for lectures, and 3 guineas per quarter for practical instruction.

Dr. Symes suggested that some better arrangement ought to be made for teaching Pharmaceutical Chemistry in Liverpool, and thought that there was something wrong, as the other science classes in the town were well supported. He thought it was a great mistake for young men to wait until the eleventh hour, and leave their studies until they went to London for examination, as that was simply a "cram." Their time should be more or less occupied in fitting them for their future life as pharmacists.

The President then read his inaugural address.

Mr. A. H. Mason, F.C.S., moved a hearty vote of thanks to the President for his thoroughly practical and admirable address. It was a privilege to be permitted to criticise any address from the Chair to the Association without showing any want of courtesy. As the President would be aware, he was prejudiced against subjects of a definite trade nature being brought forward at these meetings, and he therefore thought the legal aspect of counter-prescribing was one which did not immediately concern the scientific bearing of the Society, and certainly one in which the public were not to be educated from the President's chair. The President had said that the telephone was simply a toy, but if he would walk down to Hanover Street he would soon be convinced of its practical utility, as there were two constantly in use there with advantageous results. Respecting Professor Tichborne's paper on adulteration, read at Dublin, he was rather surprised to hear the President speak so highly of it, as his impression of the paper referred to was that it was of a most sensational nature, and one which justified the remarks made upon it by the medical Press. He (Professor Tichborne) most distinctly stated that the working of the Adulteration Acts was a failure, and had it not been for the strong protest of Mr. Umney, the public might have been led to believe that the statements made by Mr. Tichborne were facts. Respecting the application of hydrobromic ether as a substitute for chloroform, he was aware some medical gentlemen used it, but it was found to be so uncontrollable that he thought there was no probability of its taking the place of chloroform, as there was considerably more danger attending its administration.

Dr. Symes, in rising to second the resolution, said he could thoroughly endorse what Mr. Mason had said in reference to the usefulness of the telephone, and thought it a very valuable invention. He considered the law in reference to adulteration was very unfair in relation to the chemist and others: for instance, if a chemist sold an article which was adulterated and was summoned for so doing, unless he contested the case he was immediately branded as one who sold adulterated goods, and if he did contest it and win, in most instances he had to bear the cost of the trial just the same. Referring to the President's remarks on malt extracts, Dr. Symes said they must remember that though diastase was a good food-solvent, the alcohol with which it was combined considerably retarded the digestion of albuminous substances, and therefore could not be recommended in the form of beer, &c.

The resolution was carried with acclamation.

THE PRESIDENT'S ADDRESS.

After congratulating the members on the continued success of the Association, the President said:—

As a pharmacist, addressing a society composed largely of pharmacists, I may, I trust, be excused for referring to matters which can hardly be of much interest at present to persons not themselves of our own calling.

For some months past a legal battle has been carried on between the Chemists and Druggists' Trade Association and the Society of Apothecaries. The cause in dispute is what is called "counter prescribing." I should, perhaps, apologise for introducing such a subject on the present occasion, but I believe that the question not only concerns many members of this Association, but also the general public. The latter knows little about the law of the matter, and less of what would be the probable result of a decision of the extreme character, which alone would satisfy some persons. To defend the practice of medicine or surgery by chemists would be very far from my wish. A chemist who, without a proper medical and surgical training, induces persons to commit the care of their health into his hands is guilty of a misrepresentation which I can hardly characterise as less than fraudulent. But to say that a pharmacist, knowing the nature and properties of his wares, shall not recommend them for use in the cases for which they are specially intended, is to deny to him the right which is common to all others.

I believe I am correct in saying that the outside public prescribe far more medicine than all the doctors and druggists together. What is more natural than that when a man has derived benefit from the use of a particular preparation or drug, he should suggest its use to a friend, whose symptoms are apparently like his own? Such recommendations may very often be useless or even hurtful, but would anyone suggest that they should be prohibited? Many little ailments, too trifling to warrant a man in spending a guinea, or half a guinea, or even half a crown, in addition to the loss of time involved in a visit to a doctor, but which, at the same time, are very annoying and even painful, are relieved by some simple remedy suggested by a druggist. No one is defrauded or injured. The druggist earns an honest sixpence or shilling. and his customer is relieved or cured. Or suppose an individual receives a slight wound, and is in the same unfortunate position as your president, namely, *minus* a wife, what is more natural or proper than that he should run to a druggist who has sponge, lint, and plaster at hand, rather than to a draper, or possibly some one would suggest, a butcher? Take another case. A man has a sore throat. Unless it be very bad, or he be rich, he will get an astringent, gargle, or lozenge, or application from a druggist. Is it not better that he should do so than that he should go about grunting for a week, an annoyance to himself and everyone he comes near.

I make these observations because I am convinced that if in these matters the rein be drawn too tightly the effect will be, not to drive people to the medical men, but to give an immense impetus to the trade in proprietury articles, popularly but very absurdly called patent medicines. I hope I shall not be misunderstood. I would not defend a chemist or druggist who treats serious cases, or even cases in which the symptoms, though not then serious, may be premonitory of something serious. The man who so acts not only wrongs his customers, but wrongs the professional class whose members have devoted their talents and money to acquiring the knowledge necessary for the treatment of diseases.

Pharmacists have little to fear. So long, and in so far, as they supply a public want, the law will not, and even if it would, cannot prevent the public from availing itself of their services. Some temporory inconvience may arise from an extreme legal decision, but in the long run the public requirements must, and will be, respected.

The past year has been prolific in scientific novelties. The liquefaction of the so-called "permanent gases," the practical development of the telephone, the production of the phonograph and microphone have succeeded one another with bewildering rapidity.

The extreme simplicity of the means by which the marvellous results attained with these three new scientific toys (I fear they have hardly yet got beyond that stage of their xistence) is such that one's mind almost refuses to accept statements of sober fact the accounts concerning them. he great difficulty hitherto found in the practical working the telephone in noisy places seems in a fair way of being moved by the agency of the microphone. Who knows but at some day the much vexed question of parliamentary porting may be settled in a manner satisfactory to all rties except the gentlemen of the press and, perhaps, ajor O'Gorman, by the introduction into the precincts of e chair of a set of phonographs.

The adulteration question was next referred to, and the resident remarked that magistrates, many of them, at all ents, in common with many newspapers, proceed on the sumption that every tradesman is a rogue until he is oved to be otherwise. I had the pleasure the other day, e continued, at the British Pharmaceutical Conference, of stening to a moderate and sensible paper on the adultera- on of drugs, by Professor Tichborne. The newspapers, tally misapprehending the aim and nature of the writer's atements, forthwith announced that Professor Tichborne ad declared that, in his opinion, as far as drugs were con- rned, the Adulteration Act was almost a complete failure, ad that serious adulteration was still very commonly met ith; the fact being that he declared nothing of the sort. gain, because an obscure person, calling himself, or at all ents styled by the newspapers, a wholesale druggist, by me extraordinary and still unexplained blunder, mixed senic in a batch of violet powder, the newspapers write undreds of articles, in which it is assumed that such lmixture is intentional, and is almost universal.

The other day a batch of dealers were summoned, and ctually heavily fined, because they sold so-called soda water, hich did not contain soda, whereas it is a fact that the ublic does not want, and any one who asked for a bottle of da-water and was served with the Pharmacopœial prepara- on would denounce it as "soap suds," aad take care not invest in a similar manner again.

Such instances as I have ventured to adduce (and they ight easily be multiplied), have several most mischievous sults. They bring into hatred and contempt the Adultera- on Act, and in a secondary degree the law and its adminis- ation. A still more serious evil for the public is that these oceedings tend to drive honourable and high-principled en out of all such trades as are liable to be affected in the anner described.

I hope I shall not be considered presumptuous if I venture suggest that there should be appointed a small number— need be very small—of analytical referees or assessors, hose duty it should be to assist by their technical and ientific knowledge in all cases of appeal from the decisions the primary tribunals. Their functions would be analo- ous to those of the nautical assessors who now assist by eir practical knowledge and experience in the settlement inquiries into the causes of casualties to shipping.

But to turn to matters of more scientific interest. A new tificial oil of bitter almonds has been prepared in ermany from Tolu ol., and is declared absolutely identical its characters with the natural product, which has been eprived of its hydrocyanic acid. A new method has been escribed for the production of artificial volatile oil of ustard. Another triumph of chemistry, in realms where, ot many years since, it was believed that natural processes ere unapproachable, is the discovery that isatin—a sub- ance capable of conversion into indigo—may be obtained y the oxidation of amido-oxindol by either nitric acid or e perchlorides of iron or copper. Indigo, artificially pre- ared, is, I believe, at present only a chemical curiosity, but s production as an article of commerce is, doubtless, only question of time.

To the list of alkaloids and active principles must now be lded Gelsemia, from *Gelsemium sempervirens*; Cyclamia Arthanatin, from *Cyclamen Europæum*, said to be similar curarin, and a remedy for tetanus; Sicopirin, from the razilian tree *Borditchia major*, which is used in syphilis d cutaneous diseases; Capsaicin, from cayenne fruits; eliotropin, from *Heliotropium Europæa*; Ditain, used as inine, from *Echites scholaris*; Emodin, from *Rhamnus angula*; Timbonin, from *Paullinia pennata*, a plant closely lied to that yielding guarana. As the name capsicin has r years been applied to an oleo-resin, and also to a crys- lline substance obtainable from cayenne, but neither of which can be recognised as its active principle, I may explain that the substance now referred to—the name given to which is almost identical—may, from its properties and physiological action, be fairly considered as the active principle of cayenne.

The method of preparation briefly stated is as follows:—Dissolve the ethereal extract of the fruit in boiling caustic alkali, dilute with water, and precipitate with BaCl, wash and dry the precipitate, dissolve in ether, evaporate to dryness—product is capsicol. Capsaicin is obtained thence by dissolving in almond oil, separation with proof spirit, evaporation, solution in dilute caustic potash, and finally treatment with dilute ammonia, from which the capsaicin is deposited in the the form of pearly white crystals.

Gelsemia, which, according to Professor Sonneuxhein, is identical with æsculia, is prepared from the alcoholic tincture. This is treated with acetate of lead, the lead precipitated with sulphuretted hydrogen; the mixture is shaken with ether, and an excess of caustic potash added. The precipitate is dissolved in HCl, precipitated with caustic potash, and the gelsemia separated by ether, which is evaporated off.

Chloroform as an anæsthetic is again attacked, and threatened with extinction. Time will show whether the new candidate for public favour will be more successful than its predecessors. Hydrobromic ether, the composition of which is represented by the formula C_2H_5Br, in some respects resembles chloroform. Like it, it is colourless, transparent, of a pleasant odour, sparingly soluble in water, freely in alcohol and ether, and of a very high specific gravity. Several methods for its preparation are given, but I will not trouble you with the details. Perhaps I am too conservative, but the dismal failures that many much-vaunted improvements, tetrachloride of carbon. for instance, have turned out to be when tried by disinterested and not rashly sanguine experimenters, make me very cautious of accepting the glowing accounts put forth concerning new remedies and appliances.

The President next alluded the experiments which had been made by Mr. Coleman, F.C.S., with Hoff's malt extract, which showed the remarkable power which that preparation possessed of dissolving starchy substances. These experiments and results were described by us in THE CHEMIST AND DRUGGIST of May last. Mr. Abraham announced that he had undertaken a series of experiments with other malt preparations which he hoped shortly to bring forward.

Having alluded to the discovery and character of the new metals—Neptunium, Lavœsium, Gallium, and Davyum, Mr. Abraham concluded his address by expressing his hope that the session now opening might be one of satisfactory progress.

SCHOOL OF PHARMACY.

Bloomsbury Square.

THE opening meeting of the session was held on Oct. 2. The chair was taken by the President at 8.30, and, after the professors had read their reports, the President proceeded to distribute the prizes to the successful candidates.

The following is the list of prizemen:—

CHEMISTRY AND PHARMACY (Professor Redwood).

Ten Months' Session.

Silver Medal	Allen, Henry.
Certificate of Honour ...	Cox, John Goodwin. Sangster, John Graham. Warrick, F. Walmsley. Jackson, Alfred Henrick.
Certificate of Merit ...	Cook, William Richard.

Five Months' Courses.

First Course.

Bronze Medal	Mason, Wm. Brandwood.
Certificates of Merit ...	Sangster, John Graham. Allen, Henry. Cox, John Goodwin. Collinson, Fredk. Wm. Ashweek, John Sydney.

Second Course.

Bronze Medal	Jackson, Alfred Henrick.
Certificate of Merit ...	Furness, Joseph Machin.

BOTANY AND MATERIA MEDICA (Professor Bentley).

Ten Months' Session.

Silver Medal	Allen, Henry.
Certificates of Honour ...	Sangster, John Graham.
	Cox, John Goodwin.
Certificates of Merit ...	Jackson, Alfred Henrick.
	Thompson, John Hartley.
	Cook, William Richard.

Five Months' Courses.

First Course.

Bronze Medal	Henry Allen
Certificates of Merit ...	Cox, John Goodwin.
	Mason, Wm. Brandwood.
	Ashweek, John Sydney.
	Sangster, John Graham.
	Warrick, Fred. Walmsley.

Second Course.

Bronze Medal	Jackson, Alfred Henrick.
Certificate of Merit ...	Furness, Joseph Machin.

PRACTICAL CHEMISTRY (Professor Attfield).

Standard Number of Marks, 100.

Silver Medal	Allen, Henry, 87 marks.
Bronze Medals	Sangster, John Graham, 82 ditto.
	Jackson, Alfred Henrick, 77 ditto.
Certificate of Honour ...	Cox, John Goodwin, 75 ditto.
Certificates of Merit ...	Thompson, John Hartley, 70 ditto.
	Ward, John Septibo, 68 ditto.
	Smith, James William, 62 ditto.

Herbarium Prize.

Silver Medal	Shrivell, F. W. Edward.
Bronze Medals	Hooper, David.
	Foggitt, John Blackett.

Mr. Henry Allen, the triple medallist, has been appointed assistant demonstrator in the laboratory.

Council Examination Prizes.

Pereira Medal (silver), and Books value 5*l.*, presented by Mr. T. H. Hills.
John Graham Sangster.

Pharmaceutical Society's Medal (silver), and Books value 3*l.*, presented by Mr. T. H. Hills.
Alfred Henrick Jackson.

Pharmaceutical Society's Medal (bronze), and Books value 2*l.*, presented by Mr. T. H. Hills.
John Septibo Ward.

Mr. Taylor reported that the successful candidates for the Bell Scholarships were Mr. Alcock and Mr. Allan.

Mr. Octavius Corder, of Norwich, then delivered the following inaugural address :—

My Friends,—" I find I know not anything." Thus writes one who has probably done more to influence and modify the train of English thought in this nineteenth century of ours than most men; one, the influence of whose opinions, quietly and without any great show, will be unceasingly felt, not only in his own day, but as time rolls on will be recognised as " current coin," when the writer himself will have long passed away. And yet with all this grasping for knowledge, this constant craving for more light, it comes after all to little more than glimpses of things, or perhaps better expressed,

> An infant crying in the dark,
> And with no language but a cry.

After I had read the very excellent address of my friend. Mr. Southall, delivered before the students last October, I could not but feel that the work was so thoroughly done, and the subject so exhausted, that there remained but little for me to do; and when we consider that an address is a yearly affair, you can hardly expect any amount of original research or thought; and so I was reminded of an incident, recorded by one of the old chroniclers, who tells us that when the Venerable Bede had well-nigh finished his last great work, his amanuensis, wishing to encourage his now rapidly-failing master, said " But one more chapter;" then later on, " but one more verse;" then, " the last word." The difficulty of addressing you can hardly be sufficiently estimated, for what I say to you this evening had to be noted down, from time to time, just as the thought or the leisure presented itself; so that you must not expect any very settled or elaborate essay.

He who writes professionally does so to some extent mechanically, but he who delivers but one address finds it a much more serious affair. And so I would ask of you to judge of this attempt, not as critics, but as friends who have met me this once, some of you only this once, in the journey of life. This word, Life, suggests to me that I may say a few words to you this evening concerning it; not that we know much about it, either in the plant, the mollusc, in the bird, or in the mammal. If you can tell me what it is, I could much more readily tell you a great deal about it. We may argue and theorise, talk much, and write great folios to show what it is, but after all we have merely proved its existence; the vital principle, the strange secret essence remains unknown, and must remain unsolved: to be able to demonstrate a life seems beyond human power. It has been said, and the idea to some extent appears a feasible one, that we have lost a sense, that of seeing the invisible. Tennyson's words become very real, and give much food for thought when he says :—

> Flower in the crannied wall,
> I pluck you out of the crannies;
> Hold you here root and all in my hand,
> Little flower! but if I could understand
> What you are, root and all in all,
> I should know what God and man is.

As far as the plant or life in general is concerned, we know that sun-light and sun-heat

> Give the reed and lily length,
> Give to oaks and oxen strength.

And thus we feel that the old Fire Worshippers had no mean notion of the Most High when they gave to the sun highest honour as the source of light and heat and life, the withdrawal of his rays causing darkness, decay, and death. Beyond sun-light and heat being the sustaining power, we know but little; the questions which puzzled the author of the Book of Job, written most likely in the days of the shepherd kings, when man's life was much more recent on the earth than now, continue equally to puzzle us, several thousand years further down in time. We are told that the corpuscles in the amœba, low down in the scale of animal life, are identical with those of the highest mammal; of the sap in the tree pursuing its wonted course between the bark and the cambium layers of the wood, propelled onward and upward by an invisible force, but by a fixed law depositing carbon to form cells and fibre and tissue, giving strength and stability to the stem, freshness and greenness to the leaf, beauty and colour to the flower; of the blood propelled by a pump-like force, never ceasing whilst life lasts, giving energy to the mind, power to the frame, and mantling the cheek of beauty. These and hundreds of other instances may be cited as caused by life, are the results of it, but are not the life itself. Wiser heads than mine have thought much on the potentiality of matter, so much so that they would account for the existence of all life to its power. But however powerful matter may be (as witnessed by the force of the glacier slowly grinding its way down an alpine valley or the mountain-stream wearing its hollow bed out of the rock), or however clever the chemist, yet with all the power of matter at command, with all the knowledge he possesses of the exact proportions of the elements required, yet man or matter have never yet been able to evolve *de novo* a life in plant or animal of even the lowest and most humble form. And this, to me, is the great stumbling-block to the reception of the so-called development theory, that we have never found (if I may so say) a life produced *per se.* We can take a flower, pull off the calyx and corolla, examine the stamens, scatter the pollen off the anther, dissect the pistil nd ovary, but in opening out we have at the same time estroyed, so that, however put together again, it will never be fertile; the life has escaped, the strange mysterious essence has gone, so that the rose will never again delight with its beauty or refresh with its fragrance. We take an gg from the nest of the wild bird and break it, but, however carefully put together, that egg can never again be ferile; the something, which came we know not whence, has gone we know not whither, so that the *Te Deum* of praise which would have risen in spring and summer from the hroat of that wood-bird will never find an utterance; thereore, before exercising what you may consider your preogative to kill, remember you are taking what you never an give back! We must choose one of two views as to the progress of life on the earth: one of development, the other of a series of successive creations, commencing low down in the scale both of the animal and vegetable kingdoms, each one higher than that which preceded it. These creations, as far as we know (I would speak as far as I possibly can with a freedom from dogma), have long ceased; indeed, as far as we can see, we may fairly presume that man was the last work. Old forms have died out both of plants and animals, and variations and varieties without number appear and disappear; education, culture, selection, and care will account for these. We see that all life is progress. The lowest forms of animal life dividing and subdividing; the caterpillar weaving its own shroud to emerge to something higher and brighter; the egg brooded with tender care or laid in the sand careless whether the foot may crush or the beast devour; everything points upwards and onwards. Nothing without its use and place in the great whole; and as amongst the dust and turmoil of Lebanon the stones were hewn and the timber made ready, each beam and rafter for its place in the Great Temple, so, in nature's chain, each is so needful to the well-being of the other, and at the same time so complete, that it matters not "which link you strike, tenth or ten-thousandth breaks the chain alike." Without attempting to say what life is, we can search downwards and at least with some degree of assurance arrive at the beginning of it, and for this purpose we must go back to time so remote that, to us of a few years' growth, we cannot but fail to appreciate its remoteness. Life, from the creation till now, has evidently not been an eternal succession of like forms of being, but rather the humblest first. In the Laurentian rocks, deepest and oldest known to the geologist, long supposed to be azoic, devoid of the remains of all life, most altered by heat and heated matter, we find, according to recent research, the first glimpse of animal life in the *Eozoon Canadense*, or Canadian dawn animal; and thus, looking back, we cannot but feel a certain amount of awe to hold in our hand very near to us the print of the first creature into which was breathed a life. This "life-dawn" is not confined to the Laurentian rocks of Canada, but is found in Norway, Sweden, and elsewhere; nothing very elaborate in its construction—a protozoon or amœba-like creature.* This, then, we may consider a starting point, and corresponding with it what is generally called a low form in the vegetable world. And feeling, as I do, that this is not the time, nor do I profess to be qualified, to determine any theory which has been advanced or received, yet this much I think will be allowed by all, that the higher animals and man have only comparatively recently appeared on the stage, and also at the time when all was prepared and made ready for them.

With the first appearance of animal life, such as the various forms of protozoa, we find, as might be expected, a life of the lowest forms of algæ, produced, as we know all such are, by spores. Each generation of life grows a tiny deposit, so that 1,000 feet deep of chalk may be traced to the remains of foraminifera, many of them so minute as to require microscopic power to examine them. How long this may have taken to deposit must be a matter of conjecture; but when we consider the immense bulk of the material and the minuteness of the agent, at least we must allow many thousands of years for its gradual accumulation.

Next comes the era for corals, molluscs, and crustacea in the animal world, and with them the higher forms of algæ amongst vegetables, simple plants of cellular construction, pointing to a period when all seemed a waste of waters. No need of insect intervention here, for these grew as they do now, by cell development, by division of cells, by cellular prolongation. Here all increase takes place by very simple means, by spores contained in mother-cells or perispores. In some, reproduction is effected by spores which are formed in the interior of cells by a change in the arrangement of the granular matter contained in them; in others, as in diatoms and desmids, increase is effected by division of the parent cells into two portions, which become more or less detached, and so new individuals are formed. This occurs only within certain limits, ; conjugation and the formation of sporangia is for the permanent continuance of the species, but in all cases each seems sufficient of itself to insure increase without any intervention of outside means. Again another era, and we find a fresh life has appeared. Fishes, amphibians, with strange, uncouth saurians, such as Milton might well have portrayed, they, happily for us, now long passed away. With these we find plants of acrogenous growth, giant ferns, and lycopods, huge club mosses, and great equisetums, of which our present ferns and meadow horse-tails are very feeble types. To this era we are indebted for our coal formations, the impressions left behind enabling us to judge of what the vegetation consisted. Leafy lepidodendrons, with their delicate and feathery fronds; sigillarias, with their fluted stems and enormous matted roots; calamites, with their singular branches; tree ferns and coniferous plants, resembling the Norfolk Island pine, towering high above the rest of the forest, reproducing in the quiet way our ferns still have, or in the secret manner the fir-cones still know. Not for long ages after did the grasses spring up with their graceful nodding plumes, or flowers come making bright and lovely every knoll and thicket. A new creation now takes the place of the old forms. Mammals displacing saurians, cycads and palms to some extent the ferns and club mosses, till at last comes man before us, and with him angiosperms in all their beauty and brightness. All this time nothing lost, nothing wasted in the great laboratory of Nature, nothing really gone wrong all these thousands of years, if we except death and decay, which, by the way, are but the beginning of life. And thus the round has gone on, oxygen and carbon combined by the mammal; oxygen set free from the carbon by the plant. Is not, then, all life a strange mystery, beyond our tissue-paper thickness of understanding? Why am I saying such simple facts to you? Simply, that you may think out a little of the wondrous truths which are around and about you, only waiting for your notice and observation.

Mr. Corder then described some of his observations during a recent tour in the Engadin. He went on to say: A few words only in conclusion. The "true moral lesson, 'See what comes of being good,'" has been set forward so often that I will not enlarge upon it. I presume that your presence here is sufficient to warrant me in supposing that you have set your minds on passing certain examinations; keep that idea as much as possible in the background. Study because you like it, and I have no fear as to the result. That which is grudgingly attained will, as a rule, be found equally grudgingly parted with: hence to some extent the impossibility of at all times forming a correct estimate of the knowledge possessed by the candidate. The desire of the examiner (I speak from the experience of several years in that capacity) is to pass, not to send back the student; believe me, it is by no means a pleasant task to affix a "0" to any man's name. A threefold duty has to be performed—justice to the candidate, security to the public, and satisfaction to the examiner. What I hope is that the session 1878-79 will afford a striking contrast in its favour compared with previous years. We must, by the nature of human fallibility, be liable to errors in judgment, but, as a rule, I believe the results have not fallen far short of the desert. I am not in a position to offer you either a panacea to arrest failure in life or to insure success, except one word—work! This much I do know, that the best life does not consist in abundance. I have sufficient faith left in honest endeavour to believe that a living may be obtained by fair trading, notwithstanding the lowering aspect of trade interests; surely not by keeping open shop an hour later than your neighbour, or by cutting down fair prices—cheap physic, to say the least, has ever proved a failure and an abomination; the race has not yet come who will take double quantity because of a reduction in price. Reduction in price and cutting may appear to succeed for a time, yet the Nemesis will surely come and avenge herself on the offender.

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* Messrs. Kay & Rowney, of Galway College, repudiate the idea and refuse to acknowledge that the animal nature of *Eozoon* is by any means an ascertained fact.

Life is real: see, therefore, that it be earnest. The journey can only be gone over once; therefore, let it be done well.

Whether the coming generation prove a better one than the present is very questionable. I rather fear the worse. An age of reason is not likely to be an improvement on an age of faith. The one leans on self, the other rests on a sustaining Power. Why discredit the miraculous, because it is said to have happened long ago and in distant places, seeing as we do in all before us hourly, daily miracles of wondrous portent? True, the one is distant by reason of time and place; the other plain to us and appreciated by our several senses.

Think well before you throw aside old truths, the more especially if you have nothing better offered you than husks in the place of what has passed as grain. Let it not be found that half the pages of life have been so blotted and smeared that there is nothing worthy to record. Bear in mind that in a very few years you must take the foremost rank and place of those who are now standing in the front. You may not expect to surpass Sir Humphrey Davy in chemistry, Buffon in natural history, Linnæus in botany, or Pereira in materia medica; but you may so do your duty and so employ the talent that "Well done!" will be your award.

I say to thee, do thou repeat
To the first man thou mayest meet,
In lane, highway, or open street,

That he and we and all men move
Under a canopy of love,
As broad as the blue sky above.

And ere thou leave him, say thou this
Yet one word more, They only miss
The meaning of that final bliss

Who will not count it true that love,
That blessing not cursing rules above,
And that in it we live and move.

And one thing further make him know,
That to believe these things are so,
This firm faith never to forego,

Despite of all that seems at strife,
With blessing or with curses rife,
That this is blessing—this is life!

At the close of the address,

Professor Markoe (of Boston, Massachusetts) moved a vote of thanks to Mr. Corder, saying he felt it a great honour to be called upon to do so, and that it would be appreciated as such by the Massachusetts College of Pharmacy, which he represented. It had been hinted to him that perhaps some little information with regard to the way in which pharmaceutical education was pursued in the States might be of interest. In the first place the United States Government did not permit of national interference with the domestic affairs of the various States. The United States consisted of a large number of different States or commonwealths federated together for common defence and the development of commercial produce, but in their domestic relations each State was free and independent, so that anything like a universal pharmacy law would be quite at variance with the genius of their system of government. It therefore devolved upon every State, and frequently on individual cities, to pass such restrictions on the practice of pharmacy as citizens might deem fit. In a general way there were no such legal restrictions, but anyone who thought fit to do so could open a store, and in some parts of the country this liberty was largely exercised. Still, pharmacy as a profession had been recognised and organised in America rather longer perhaps than it had been in Great Britain. The Philadelphia College of Pharmacy was about to commence the fifty-sixth annual session of its School of Pharmacy; the College of Pharmacy of New York followed with an age of only one or two years less; and the Corporation of Pharmacy of Massachusetts was nearly twenty years of age, although it did not see its way to avail itself of its corporate rights to establish a school and grant diplomas until about twelve years ago. He should be within the mark in saying that there would be not less than 1,500 students throughout the United States attending the courses of instruction at these public colleges of pharmacy. Pharmaceutical legislation was making considerable progress, and pharmacy laws were now in actions applying to the cities of Philadelphia, New York, Baltimore, San Francisco, Louisville, Chicago, and the States of Rhode Island, New Jersey, and New Hampshire. These various laws were carried out by State Boards of Pharmacy, nominated by the pharmacists themselves, and appointed from those nominated by the Governors of the State. Each city had a right to petition the Legislature for a law which should apply to that city alone, for there were often communities where the population was so sparse as not to make it judicious to apply such restrictions as would be proper to enforce in older and more settled communities. In Massachusetts no qualification was required to allow a man to open a pharmacy. But in Boston alone they had a class of 95, who came only because they desired education. And the same might be said of many other States. The different systems under which the schools of pharmacy were conducted in America might perhaps explain the larger numbers attending them. The term "college of pharmacy" in the United States was applied to a corporation of druggists. They did not necessarily have a school, because frequently a college of pharmacy was formed in a locality which was not populous enough to support a properly endowed school, and they contented themselves by getting premises, collecting a library, and giving occasional lectures without any systematic course of instruction. When they became strong enough they established a school, and if such schools were in a weak state, they were frequently carried on at the expense of the members of the various colleges of pharmacy. In Boston the managers of the college ensured a full attendance at the classes by the arrangements they made with their apprentices. They had no indentures in the States, but the young man came and agreed to stay four years, during which time he became familiar with the details of practical pharmacy, and in most cases the employer covenanted to send him to the lectures of the College of Pharmacy, and to pay the fees as part of his regular compensation. This had become the rule in all the leading establishments, so that they did not leave it to the young men to say whether they would go to school or not; but, republicans as they were, they compelled them to do what was right in this respect. There was no trouble about it, however; the difficulty rather being to restrain the eagerness of the young men to attend the schools. This practice had been followed by the leaders in pharmacy in Boston and other large towns, and the mere fact that the College in New York was preparing to get larger premises in order to accommodate the class was sufficient to speak as to its success in that city. A young man who wished to become a graduated pharmacist must take a degree in these, the only colleges; they did not allow him the right of studying at random, but a certain amount of study must be carried on in one of these, the only, schools. For instance, if a young man had studied in Philadelphia, and attended a course of lectures there, and then came to Massachusetts, he brought to the faculty of the latter college a certificate showing that he had attended regularly the junior course in Philadelphia and passed his examination, and he was then admitted to the senior class in Massachusetts College. If he had attended portions of two classes and wished to take his degree, he would be only credited for one. In localities where there was no college of pharmacy, he was credited with one course, provided he brought certificates that he had passed a suitable examination in some medical college where the same branches were taught. They also insisted that a young man should, under any circumstances, present satisfactory evidence that he had served four years with a competent pharmacist in the actual dispensing of prescriptions, and the regular colleges refused to acknowledge diplomas given by one or two schools who attempted to fit young men for the branches of pharmacy by a purely theoretical education. There was a perfect accord between the regular schools of pharmacy in America so far as the conditions required for graduation were concerned. There was a convention every year of the teaching colleges, where delegates from each college met together and agreed on the character and conditions of the examinations. In conclusion he begged to tell the successful students that the honours they had gained were simply the certificates that they had perhaps only obtained the minim amount of knowledge necessary in their profession; eir *alma mater* expected much of them in future, and they uld fail in their duty if they hereafter did not do much cellent work for pharmacy.

The vote of thanks was passed unanimously, and briefly knowledged by Mr. Corder.

Dr. Greenhow then proposed a vote of thanks to the esident for the manner in which he had presided over the oceedings.

It was carried unanimously, and the President briefly knowledged it.

HE SOUTH LONDON SCHOOL OF PHARMACY.

N Tuesday, September 17, the opening of the tenth session of the South London School of Pharmacy took place. e Rev. S. B. Harris, Vicar of St. Mark's, Kennington, was the chair, and there was a large audience.

Mr. W. Baxter (secretary) made his customary statement. advised the students to observe punctuality, attention, d industry, and avoid coming in late at class meetings. they did not attend their classes punctually it interfered t only with the lecturer but with the students. They had idents from Australia, India, Africa, and other portions of e British Empire, and, not the least of all, from that noble rt in the Mediterranean—Gibraltar. Having said thus uch, he would in conclusion just state that the gross attennce in the past year amounted to 192. There were 135 inors, of whom 26 had not as yet presented themselves for amination. Seventy-seven had passed, and 32 failed. Of ajors, 23 were entered, and six had not presented themlves; but the remaining 17 had passed. The other students d been of a miscellaneous order—namely, nine medical idents, six from the London University; six general emistry, three medical officers, and ten from Apothecaries' all. Seventy-seven students had also passed the examinaon of the Apothecaries' Society.

Mr. Joseph Ince (the visiting examiner) then spoke as llows:—Once more we have arrived at the opening of a w session, and it is the wish of the directors of this hool that we should not meet together simply as a matter course, but that some few words should be addressed to e students partly by way of congratulation for the past, d partly by way of encouragement for the future. It has llen to my lot more than once to have been the spokesan, and thus, following a now time-honoured custom, I bid n, in the name of the professors, and in my own, the artiest welcome. I have been thinking, considering the lotted time is very short, what it would be best to say, and magine I can do no better than describe the origin of this hool, the reason of its establishment, and the position it w holds.

Forty years ago—the date assigned will allow a margin—ere was no systematic public teaching of pharmacy in gland. The assertion appears bold, but it is nevertheless rrect. On the Continent generally, and notably in France d Germany, a very different state of things obtained. iroughout those countries there was a well-ordered, comlsory education. No one was allowed to practise pharmacy io had not passed regular examinations, and was, in conquence, a qualified man. The pharmacist was the confintial friend of the physician—he was under Government otection—while the fact of his being an educated person ive him the passport to society. He was consulted in edico-legal cases on all points with which he was supposed be conversant, and civic and social honours fell to his are, not only in the provinces, but in great centres such as ris and Berlin.

At this same period in England there was no test of alification whatever, consequently the druggist had no cognised distinctive standing, and the honourable class w known as pharmacists had no existence.

It is my misfortune to be compelled to deal apparently in sertions, but I would ask you to believe that I advance thing which I am not able to substantiate. Still I am more than unwilling that the matter should rest on any dictum of mine, and I will therefore read a sentence taken from the original statement made by the late Mr. Jacob Bell, May 11, 1841:—"In chemistry and philosophy Great Britain holds a prominent place among other nations. In the practice of medicine and in surgery our character as an intelligent and scientific nation loses nothing by comparison with others. In the arts and manufactures, generally speaking, we can compete with the whole world. But in pharmaceutical chemistry, in the application of the science of chemistry to the art of relieving the numerous maladies to which human nature is liable, it must be admitted that we are deficient."

A change came at last—due not immediately to any view of the value of education, but to the influence of a pressing danger. A Bill was brought before the House of Commons bearing upon the sale of poisons. Into the provisions of that Bill I am not about to enter. It was popularly known as Hawes's motion, and suffice it to say that its operation would have affected most injuriously the trade of the chemist and druggist, would have put him in a most unenviable position, and gone far to annihilate his independence. By dint of supreme activity the Bill was defeated, and pharmacy breathed again.

But it was now felt that though one wave had rolled over harmlessly another might succeed, and thus in self-defence an organisation was started which remains to this day as the Pharmaceutical Society.

It was one thing, however, to create a sort of trade-union—a kind of fictitious happy family—one thing for pharmacists to recognise themselves; another thing was wanting, and that was the recognition of the public. On what could a claim be founded? Could the members of a self-created body appeal to the medical world and say, "Please admit us to your friendship and give us your respect." But one answer could be returned—"You are men of no culture, and we refuse." Could the associated members of a trade appeal to Government and say, "Award us legal protection; let us be sole vendors of deadly drugs, the sole dispensers of prescriptions?" There was but one possible answer—"You are men destitute of qualification, and we refuse."

Did the unhappy druggist appeal to society and say:—"Please let us enter into your ranks, and let it not be thought demeaning on your part to visit us and ours." Still there was but one answer—"You are tradesmen and keep a shop exactly like your neighbours, and we refuse."

Then it was seen that there was no extrication from the difficulty and no hope of rising but by means of education. The practical expression of that only hope was the school in Bloomsbury Square. It was obvious from the first that that establishment alone would never meet the wants of the community. The moment there was a thirst for information a single school was inadequate to supply the requirements of the age. Many individuals, more or less successfully, began to teach—their efforts were on too narrow a scale, and a broader system was imperative.

A brave effort was made for some years by a practised teacher, Mr. Braithwaite, and he struggled hard to keep pace with the necessities of the case. The desire for pharmaceutical instruction still went on, and it was intensified when a compulsory, instead of a voluntary examination, was imminent. Then, when larger assistance was demanded, and a wider plan became urgent, from the very necessity arose the school in which we are assembled this morning, and which is now inaugurating its tenth session under the directorship of Dr. Muter.

Of him, as he is present, I say nothing; his success (which is matter of history) requires no comment and no attestation. The establishment which he has created is no opposition scheme—it is opposed only to ignorance and superficial instruction.

I must remind you that there is an essential characteristic in the South London School of Pharmacy: it is what its name implies, a school and not a college. You come here, nevertheless, of your own free will; you are men, and can if you choose assert you own independence and despise the guidance of others. I implore you not to do so, but to accept the conditions of the place, and recollect that it is a school, with stringent regulations and a definite course of work. Lastly, in all your studies, as in all your amusements, remember—conduct is fate.

THE WESTMINSTER COLLEGE OF PHARMACY.

THE Westminster College of Pharmacy, which is now conducted by Messrs. Wills and Wootton, was opened on September 2 by a clever and interesting lecture by Mr. G. S. V. Wills on "The Air we Breathe." A number of visitors were present, and the lecture was illustrated by numerous experiments with gases, and with the air-pump.

A report of the past session was read by Mr. H. Wootton, in which it was stated that during the year 130 students of the college had presented themselves for examination, and that 109 had passed, and it was added that of all the students that passed the pharmaceutical examinations nearly one-half were from this establishment.

At the close of the last session the students presented a very handsome dressing-case to Mr. Wills in recognition of his painstaking efforts on their behalf.

FORMULÆ OF SECRET MEDICINES.

(*Continued.*)

The formulæ given below are translated (by special permission of the author) from a German collection compiled by Mr. Edward Hahn, Apotheker. The names following most of the formulæ are those of the authorities quoted for the analysis. The weights are almost invariably given in metric denominations. A gramme is equivalent to 15½ grains. The prices quoted are the nearest English equivalents to the original retail price.

Gliadinpflaster (A. L. Klose, Berlin).—For rheumatism. A thin paper on which is spread a solution of gelatine containing spirit and some acrid substance, such as cantharides or euphorbium.—*Hager.*

Glucoinosine.—A preparation for improving wine. Quicklime containing a little iron, slaked by sprinkling it with water, and partly converted into carbonate by absorbing carbon dioxide from the air. 500 grammes. 3*s.*—*Hager.*

Glycerine- Eisen- Liqueur, Wiener—Vienna Steel and Glycerine Liqueur, or Tinct. Ferri Phosporici Viennensis (H. Rosenthal).—Pyrophosphate of iron, 5 parts; pyrophosphate of soda, 15 parts; citric acid, 10 parts; water, 250 parts; glycerine, 250 parts. Digest and mix with cinnamon water, 500 parts; glycerine, 750 parts; spirit, 1,000 parts; and make into a syrup, with 600 parts sugar candy and 400 parts of water; lastly add 5 parts each tincture of ginger, lemon peel, galangal, and cardamoms. 500 grammes, 4*s.*—*Hager.*

Glycerin-Hautbalsam—Glycerine Skin Balsam.—A mixture of 1,000 parts glycerine, 120 parts orange-flower water, 1 part each oils of neroli and bitter almonds.—*Hager.*

Glycerinseife, Flüssige—Liquid Glycerine Soap.—Sesame or cottonseed oil is saponified with sufficient caustic potash, and while moist is dissolved in six times its weight of spirit of wine. The solution is filtered, five-sixths of the spirit is distilled from a water bath, and the cooled residue is reduced to the consistence of thin honey, with a mixture of 2 parts glycerine and 1 part spirit. It is then perfumed.

Glycoarnicin.—A radical cure for gangrene and tubercle (Zeller).—40 grammes clarified honey, with 35 grammes of a tincture of fresh arnica herb, made with weak brandy. 3*s.*—*Hager.*

Glycoblastol (Professor Kletzinsky, Vienna).—An extract of the pericarps of cayenne pepper, made with glycerine, diluted with a little water, and perfumed with a trace of pleasant-smelling oil containing a suspicion of patchouli. 160 grammes, 2*s.*—*Hager.*

Glyconin.—An application for wounds. It consists of 5 parts glycerine and 4 parts yolk of egg.—*Hager.*

Golden Hairwash, or Auricomus, is a clear inodorous fluid, which is said to dye hair blond or yellowish red, and really does so. Sold in bottles containing 250 grammes. When exposed to the air the fluid decomposes with time. This hair-dye is an aqueous solution of hydroxyl contaminated with traces of baryta, and can be prepared as follows:—17 parts crystallised caustic baryta and 3 parts potassium chlorate, intimately mixed in fine powder, are melted by a gentle heat. The mass must be washed with cold water to remove the potassium chloride, and the residue shaken in the cold with a solution of 8 parts glacial phosphoric acid in 25 parts water, the whole being cooled with ice. When the peroxide of barium is decomposed, the fluid should be decanted from the precipitate.—*Hager.*

Gout and Rheumatic Pills (W. Gross, Cardiff).—Pills weighing 2 grammes rolled in lycopodium, the essential ingredients of which are quinine sulphate, gamboge, jalap, resin, and a little rhubarb. 25 for 3*s.*—*Hager.*

Dr. Radcliffe's Great Remedy, Seven Seals, or Golden Wonder.—According to the prospectus, this remedy is good for cholera morbus, dysentery, diarrhœa, burns, sprains, rheumatism, warts and corns, and all diseases. In a quadrangular bottle we find about 95 grammes of a brownish-orange clear fluid, which is a spirituous tincture of cayenne pepper mixed with ether, chloroform, American oil of peppermint, and a little camphor. The proportion of these ingredients is, approximately, 4 grammes ether, 6 grammes chloroform, ·4 gramme camphor or camphoraceous oil, 2 grammes oil of peppermint, 35 grammes tinct. of capsicum, 50 grammes spirit of wine (90 per cent.). 4*s.* 2*d.*, or $1.—*Hager.*

Griechisches Wasser—Grecian Water.—A cosmetic consisting of 180 grammes perfumed water and about 7·5 grammes white precipitate.—*Dragendorf.*

Grindpulver.—Scurf Powder (Mahon, Paris).—Three powders which, according to Chevalier and Figuier, are nothing but wood ashes. Buchner found no alkalies, but announced the following composition:—Organic calcium carbonate (oyster shells, egg shells, crab shells), with a little gypsum, charcoal powder, and more or less brick-dust, powdered, mixed, and exposed to a moderate red heat in a covered crucible, till part of the chalk is converted into quicklime, and the gypsum reduced by the charcoal powder to calcium sulphide, which in its turn is gradually converted by the air into calcium sulphite. All three powders are made of the same ingredients, but in different proportions. No. 1 has more gypsum and charcoal powder; No. 2, less charcoal and more chalk; and No. 3, more brickdust.—*Wittstein.*

Grinsalbe—Scurf Salve (The Brothers Mahon).—In France it is generally a mixture of 2 parts slaked lime, 5 parts soda crystals, and 25 parts fat.—*Hager.*

Guarana (Grimault & Co., Paris).—12 migrain powders, each weighing 1·75 grammes, consisting of guarana, but perhaps also containing an admixture of cocoa seeds, neither prepared nor roasted. 3*s.*—*Hager.*

Gut-Heil—Good Health (Aust).—A liqueur containing the extractive matters of calamus root, rhubarb, cinnamon, orange peel, &c., with 35 per cent. of sugar.—*Hager.*

Haarbalsam, Vegetabilischer—Vegetable Hair Balsam (Joh. Andr. Hauschild, Leipsic).—A decoction of burdock root, containing a little spirit and coloured green with indigo.—*König.* Hager analysed a turbid brownish fluid, which deposited a brown precipitate on standing, and when filtered consisted of a decoction of burdock root with 20 per cent. of spirit. 25 grammes, 1*s.*

Haarbalsam Mailändischer — Mailand's Hairbalsam (Kreller, Nuremburg).—Beef marrow, 40 parts; cinchona extract, 5 parts; balsam of Peru, 1 part; storax, 1 part; oil of bergamot, 1 part; oil of lemons, ½ part. 24 grammes, 1*s.* 6*d.* *Hager.*

Haarbalsam, Ostindischer— East Indian Hairbalsam (Dr. Ayer).—Contains sugar of lead, sulphur, glycerine, oil of lavender, and water.—*E. B. in B.*

Haarbalsam (J. F. Schwarzlose Söhne, Berlin).—A brownish-yellow spirituous aromatic fluid, having nearly the composition of eau de Cologne, with liquid storax, carbonate of potash, and a fat—perhaps derived from cantharides. 100 grammes, 1*s.* 3*d.*—*Hager.*

Haarbalsam (A. Marquart, Leipsic).—A mixture of 83 grammes water perfumed with eau de Cologne, with 12 grammes glycerine, 4·25 grammes milk of sulphur, and 1·2 gramme lead nitrate. 2*s.*

THE NEW BILLS OF SALE ACT.

HE Bills of Sale Act, 1878, which comes into operation on January 1, 1879, makes many alterations in the present v which are of importance to all men of business. It should be rne in mind throughout that the new Act, though repealing e two former statutes of 1854 and 1866, re-enacts their most ll-known clauses, though with additions, and the result is that e whole statute law upon this question will, for the future, consolidated in this new Act. The main objects of this tute are to make registration more stringent and more widely plicable. Of late years fraudulent bills of sale have been equently registered, and many successful devices have been nployed for evading the necessity of registration. To meet ese difficulties the new Act provides that every bill of sale all state the consideration for which it is given; shall be tested by a solicitor; and shall be registered within seven ys after its execution. At present the time allowed for regis- ation is twenty-one days, and the other requirements we have med are not obligatory. It is to be hoped that the obligation state the consideration plainly upon the deed may act as a eck upon fraud, and it will at least become important when pon a disputed bill of sale the grantee has to prove what, in ct, was the consideration given.

The attestation by a solicitor means that no bill of sale will binding unless it has been executed by the grantor in the esence of a solicitor, who will have to sign a form of attesta- on setting out that he has explained the effect of the document the grantor before it was executed by him. This will add ightly to the expense of a bill of sale, but will increase its fety as a *bonâ-fide* security. The check upon such solicitors s may perform this duty carelessly will consist in their liability be at any time afterwards called upon to swear that the statute as complied with at their attestation. The shortening of the me allowed for registration, and during which a bill of sale is itself valid, from twenty-one days to seven, will also prove a eneficial reform in practice.

Upon the question of evasion the Act is very clear. It has itherto been the law that bills of sale could be kept valid by enewals every twenty days, so that registration was avoided. he practice was, and is, to continue the series until it became angerous, when the last deed would be stamped and registered, nd be held good against executions or bankruptcy. By ection 9 the new Act puts an end to this system by simply eclaring that such a duplicate bill of sale shall for the future e absolutely void, unless it can be proved to the satisfaction of Court that it was given *bonâ fide* to correct some material rror in the prior bill of sale.

The new Act has also by section 4 enlarged the definition of bill of sale that requires registration, so as to include many ocuments that now escape. At present a sheriff's bill of sale s held not to be included, but by the added words of the new ct, "Inventories of goods with receipt thereto attached, of eceipts for purchase-moneys of goods," these seem to be ntended; while the width of the expression may be held to mbrace many documents not now included. Then again, the urther additional words of the same section, "And also any greement, whether intended or not to be followed by the xecution of any other instrument, by which a right in equity o any personal chattels or to any charge or security thereon hall be conferred," will cover a large area. Charges which, hough in form merely equitable, can in fact be legally enforced, re thus brought under the necessity for registration.

The next important alteration to notice is that affecting trade achinery. At present an assignment of a leasehold interest n a mill or factory, with all the valuable machinery thereon, eed not be registered; and so can be done without the know- edge of creditors. By section 5 of the new Act this is put an nd to, and trade machinery, as therein defined, is made subject o the ordinary rule requiring registration. The same course is aken with regard to any instrument under which a power of istress is given to the grantee to recover, as a rent, either the rincipal debt he has advanced or the interest thereupon.

The priorities of bills of sale are settled by the latter part of ection 10, and for the future each such deed will have priority n the order of the date of its registration. This will affect the resent system, under which an unregistered bill of sale has riority over one that is registered, if it bear an earlier date of xecution. The effect of bankruptcy upon a bill of sale is much itigated by section 20 of the new Act, by which it is enacted that goods comprised in a bill of sale that has been, and is, registered shall not be deemed to be in the possession, order, or disposition of the bankrupt. This puts an end to the main danger that at present besets grantees, and greatly strengthens the security of a *bonâ-fide* bill of sale. At the same time it renders bills of sale still more dangerous instruments to totally unsecured creditors than they have been hitherto. The provisions for registration, renewal, entry of satisfaction, searches, and office copies, are practically the same as those in force at present.

PARIS EXHIBITION.

(SPECIAL REPORT.)

MESSRS. BEWLEY & DRAPER.—One of the earliest patented aërated drinks was registered on June 23, 1842. Mr. Henry Bewley, on that date received a patent for "an improved chalybeate water." It was an aërated drink containing 13 grains of citrate of iron in a bottle. The exhibitors base the chief claim of their exhibit to notice on the purity of the articles shown. As far as appearance goes there is nothing to dispute the claim.

MESSRS. WILLIAM CORRY & CO.—This well-known firm of aërated-water manufacturers has a good display at Paris. It is fortunate in the possession of the Cromac Spring, which has become almost one of the lions of the town of Belfast. The name "Cromac" seems to indicate that this spring was one of those regarded as sacred by the ancient Irish. "Crom" in Erse has the meaning of deity or sacred—especially in its combinations. In their trade circular Messrs. Corry & Co. publish a goodly series of analyses, dating from 1858 downwards. Professor Wanklyn, in his "Reports on Waters," and Dr. Hodges, in his "Industries of Water," both mention the Cromac Spring, and remark on the peculiarly effective natural filtration which its water seems to have undergone. A striking independent proof of the purity of the spring is furnished by the fact that after a special analysis at Netley the Government contracted with Messrs. Corry & Co. for a daily supply of 1,200 gallons of "Cromac" water for the use of the Belfast garrison. In the matter of machinery, the firm are the inventors of several appliances which replace metallic fittings by delf, granite-ware, vulcanite, &c. They make several articles which have not yet attained a general sale in the hands of druggists on this side of the Channel, such as aromatic tonic, quinine, sarsaparilla, fruit nectar, and other aërated drinks. They claim to be the introducers of the Belfast ginger ale, whose reputation is now cosmopolitan.

MESSRS. CANTRELL & COCHRANE.—This firm is an illustration of the principle that "Unto him that hath it shall be given." A few statistics with which one of the members kindly furnished us will illustrate this more eloquently than any words of ours. They employ 600 workmen; corks cost them 8,000*l*. per annum, and bottles 11,000*l*., while 196,000 bottles are filled daily at the works. Their lemonade has a flavour so much like the fresh fruit that if we are accustomed to the liquid usually sold under this name we feel surprised on first tasting it. The lime-juice champagne has a taste which is peculiar, but decidedly pleasant, and their ginger ale is really gingery. Messrs. Cantrell & Cochrane are purveyors to the Houses of Parliament, and to the Cunard, Oceanic, Inman, National, and other steamship companies.

THE BRITISH AND FOREIGN MINERAL WATER COMPANY.—The most important part of this exhibit is the machinery shown in model. By the system exhibited the carbonic acid, after being thoroughly purified, is compressed by hydraulic machinery in cylindrical doubly-tinned copper vessels. In this state it is introduced into "saturators" containing distilled water and the chemical solutions which have been separately prepared. In this way it is possible—the exhibitors say—to regulate exactly the quantity and pressure of the carbonic acid required to imitate any natural water.

RICHARD EVANS & CO. exhibit two articles which are claimed as novelties and specialities. One of these is a concentrated solution of carbonate of lithia, containing 10 grains carbonate of lithia and 20 grains bicarbonate of potash in the fluid ounce. An ounce of the ordinary solutions of this salt contains only half a grain. The other is zoedone, a patented beverage. Its name is intended to imply that it is a life-giving fluid, and as it is a solution of the phosphate of Parrish's syrup we must conclude that its makers consider these salts the most powerful life-sustaining substance known. An aërated solution of phosphates, if it could be produced at a sufficiently low price, might probably be made a very popular article.

Messrs. H. & T. Kirby & Co.—This firm can hardly expect the gratitude of retail druggists for the conveniences they provide for dispensing doctors. Nor will their handy medicine cases for travellers' and family use add much to the income of the majority of our readers. It is certainly a great improvement on the old medicine chest to have each drug already dispensed into suitable doses, and if this principle had been adopted ten years earlier allopathy might have forestalled much of the popularity of homœopathy. There is no doubt that the latter system owes part of its success to the ease with which a dose could be measured by simply counting the globules. Dr. E.A. Kirby's *Pil. Phosphori mollis* needs no recommendation on this side of the Channel, but we may mention that the firm claims the merit of rescuing phosphorus from therapeutical oblivion, and of putting it within the power of the physician to prescribe it in definite and reliable combinations. The *Pil. Phosphori* has been in use since 1871. Four years ago we noted the introduction of Kirby's glyceeol. This does not seem to have made such rapid progress in the favour of prescribers and dispensers as we should have expected. Our readers may need reminding that this preparation is a jelly of glycerine and gelatine. It is intended as a convenient excipient for medicines, especially when intended for the cure of mouth and throat diseases. It is evidently more convenient than the sugar of the official trochisci, and there is no doubt that the preservative qualities of the glycerine would do much to prevent change in any drug incorporated with the jelly. Pearl-coated pills make the remaining feature of Messrs. Kirby & Co's pharmaceutical display.

Messrs. Lewis Berger & Sons.—This is a display of artists' and other colours and of the materials from which they are prepared. Its most distinctive feature is a bronze figure of Mercury standing in his customary position, balanced on one toe on some artificially-rocky ground. Among the rocks rise two perennial springs of quicksilver, which flow into a lake. This, as usual, never gets full. Unless some artificial means of "skimming" the mercury is provided (and this is hardly likely), the combined motion of the springs provides a severe test of the purity of the metal. Mercury must be very pure to withstand, without tarnishing, continual motion in free contact with the air.

The exhibit of Messrs. Baiss Brothers is one of those which must be seen to be appreciated. It is simply a collection of drugs and powders taken from stock to show the ordinary character of their trade. There is nothing novel about it, nothing very startling; but to a pharmacist who visits the exhibition to learn where to gets drugs of the first quality, this is one of the most instructive cases he will see.

Messrs. Leslie & Co. show their very convenient patent tape-plasters. There are the ordinary strapping-plasters spread on ribbons of brown holland (1½ inch wide), silk (⅜ inch wide), and calico (⅛ inch to 1½ inch wide). They are put up in round tin boxes of suitable sizes. The *pater familias*, the surgeon, or the chemist, need only see them to appreciate the convenience of having their plaster ready cut in strips for them; and there is no doubt these little boxes would command a ready sale, especially in country districts.

Messrs. Atkinson & Sons have had a large space allotted to them, which they have filled to admiration. We noticed nothing peculiarly novel in this case, though the taste of the arrangement and, no doubt, the sweetness of the contents were worthy of the reputation which the firm has so long held.

Messrs. Yardley & Co. have a very creditable display. Among the articles we noticed specially is "Myxodine," or Carrageen Sope. Spelling in an antiquated or eccentric manner the names of the preparations of any particular firm seems to us less likely to make them easily recognised than the plan of calling them by the name of the firm itself. Horrocks' long-cloths—to go outside the sphere of pharmacy—will never be mistaken for any other, and we think the title Yardley's Carrageen Soap would be at least as advantageous to the firm as Myxodine, or Carageen *Sope*. The idea of adding gelatinous or glutinous materials to soap is not a new one. Many patents have been taken out for it, and Löwissohn has even anticipated this very invention. He adds Irish moss to soap, using borax to facilitate the admixture. The use of glue and similar bodies in soap-making increases the yield by enabling the finished product to retain a much larger percentage of water. Some think that this fact makes the addition a fraud on the consumer, but there are three considerations which balance it. Soap thus prepared can be sold at a cheaper rate; the added mucilage has detergent powers of its own; and soap containing suitable proportions is said to waste more slowly in hot water. Richardson & Watts, regarding the matter from a commercial point of view, declare that the addition is of no practical use. But, as a toilet soap, we see no reason why the emollient mucilage should not make this a popular article. Seringa perfume is our old friend the lilac under a modification of its Latin name, *Syringa*. This is itself derived from *Sirinx*, the native name of the shrub in Barbary, and lilac is a Persian word said to mean "the flower." Lime cream and lime-juice and glycerine are both exhibited. The former is a white, perfectly homogeneous emulsion; the latter has a layer of yellow oil above and a white cream beneath.

Osborne, Bauer & Cheeseman exhibit, among other things, "Double Extract of White Blossoms Perfume." The title is rather a long one, but to the intelligent public will convey pleasant ideas. The works of Sir John Lubbock and Dr. Taylor have made general readers familiar with the fact that night-flowering plants with white blossoms have generally pleasant odours. Day-flowering plants, with flowers of this colour, are not much more remarkable for their perfume than other plants. Even in England we have the white convolvulus, some scentless varieties of the dog-rose and bramble, the daisy, and the ox-eye, which are not perfumed; but within certain limits the generalisation holds good. Baby's Soap is sure to be popular. "Baby" is quite an extraordinary being, like no one else in the world, and it would be quite atrocious to think that the soap that its "Pa" used would do for baby. Mhogra Ka Phul is the name of a perfume shown by this firm. We should translate this very Oriental name as Flower of the Arabian Jessamine (*Jasminum sambac*). This plant is so highly valued by the Hindoos for the perfume of its flowers, that they have dedicated it to Vishnu their chief deity.

Messrs. Piesse & Lubin have again erected their well-known stand, and filled it with their usual taste. A brief summary of their business is a caricature statuette in soap of Dr. Piesse in the act of writing his well-known work on Perfumes, and attended by a bottle of opopanax. "Piesse on Perfumes" has been out of print for many years in England, but a new edition of the French work was issued in 1877. Opopanax was first introduced in 1866 by Piesse & Lubin, and its sale has steadily increased from that time onwards. Like all similar things it is subject to fashion, and within the last few years it has become so popular in France, that many of the native manufacturers are laying claim to the profitable honour of introducing it. All Parisian perfumers now make it, being compelled to do so by the large demand which has arisen. Most of our readers know that its name means "the all healing juice." One of the leading French perfumers has recently stated that he has brought from the East the last of the opopanax gum, and that his importation amounted to 200 kilos. Of course the gum resin is not used in the preparation of the perfume, indeed the commerce in it had almost entirely ceased more than 20 years ago. It is impossible to contradict the statement that 200 kilos. have been imported, however doubtful it may seem, but we may be quite sure that there is more to be had where the other came from. Ruban de Bruges has now been in the trade about 18 years. It was first introduced by this firm. One of the latest novelties produced by Messrs. Piesse & Lubin is the Psidium, both i's being pronounced like the pronoun. This was iginally a Greek name for the pomegranate, the flowers of ich, called balaustines, are inodorous. It has been unsferred by the moderns to the guava, best known to nglishmen in the form of jelly. All species of guava have rge white flowers, deliciously perfumed. Psidium and ermaceti soap is a specially manufactured soap scented ith the new perfume. Holy Basil is another of the ecialities of the firm. Dr. Birdwood has said (in the *cademy*)—"The most sacred plant in the whole indigenous ateria medica of India is the Tulsi or Holy Basil (*Ocymum nctum*), sacred to Krishna, and called after the nymph ulasi, beloved of Krishna, and turned by him into this aceful and most fragrant plant. She is, indeed, the indu Daphne. The plant is also sacred to Vishnu, whose llowers wear necklaces and carry rosaries (used for counting e number of recitations of their deity's name) made of its alks and roots. For its double sanctity it is reared in ery Hindu house, where it is daily watered and worshipped y all members of the household. No doubt also it was on ccount of its virtues in disinfecting and vivifying malarious r, that it first became inseparable from Hindu houses in dia as the protecting spirit or Lar of the family. In the eccan villages the fair Brahminee mother may be seen rly every morning after having first ground the corn for e day's bread, and performed her simple toilet, walking ith glad steps, and waving hands round and round the t of holy basil planted on the four-horned altar built up efore each house, invoking the blessings of Heaven on her usband and his children—praying, that is, for less carbonic cid and ever more and more oxygen." To this might asily be tacked a sermon on the disinfectant properties and erfumes, but we will leave it for a time. The courteous epresentative of the firm, Mr. Thomas Russell, informed us at they make 3,000 dozen bottles of perfume a month for eir export trade alone, none under 2*s.* 6*d.* a bottle.

MR. RIMMEL'S perfumery exhibit has already been de-cribed in these pages. That manufacturer being on one of e juries, his display was necessarily out of the competition.

"THE DIRTY BOY," a statuette by G. Focardi, which as achieved the greatest popularity, and images of which re now in all the photographers' windows, is, it is stated by he artist, merely the plaster cast of a marble which he has een commissioned to execute for Messrs. A. & F. Pears for he sum of 500*l.*

LIST OF AWARDS.

The subjoined list is not official, and we therefore cannot uarantee either its completeness or its perfect accuracy; ut we have taken pains to avoid error as far as possible, nd have endeavoured to compile, as far as is at present nown, the series of awards to firms connected with the rades upon which we report:—

ire & Calder Glass Bottle Company (Edgar Breffit & Co.), London, Glass Bottles	Silver Medal
llen, F., & Sons, London, Confectionery	Bronze Medal
tkinson, J. & E., London, Perfumery	Gold Medal
agley, Wild & Co., London, Glass Bottles	Silver Medal
arnett, Son & Foster, London, Soda-water Machinery	Silver Medal
ond, Mrs. (Hickisson), London, Marking Ink	Hon. Mention
rand & Co., London, Essence of Beef, &c.	Silver Medal
rooke, Simpson & Spiller, London, Aniline Dyes	Gold Medal
roomhead, G. E., Aberdeen, Chemical Preparations	Hon. Mention
urgoyne, Burbidges & Co., London, Chemicals	Silver Medal
ush, W. J., & Co., London, Essential Oils, Fruit Essences, &c.	Silver Medal
antrell & Cochrane, Dublin, Aërated Waters	Bronze Medal
ettl, E., & Co., London, Barometers, Thermometers, &c.	Bronze Medal
leaver, F. S., & Sons, London, Soaps and Perfumery	Silver Medal
odd, H., & Co., London, Globe-stoppered Bottles for Aërated Waters	Silver Medal
olman, J. & J., London, Mustard, Starch, Blue, and Corn Flour	Gold Medal
orry, W., & Co., Belfast, Aërated Water Manufacturers	Bronze Medal
allmeyer, H. J., London, Philosophical Instruments	Gold Medal
esoto Alkali Company (Limited), Widnes, Lancs.	Bronze Medal
ollond & Co., London, Scientific Instruments	Bronze Medal
Etzensberger, R. U., London, Apparatus for Making Infusions, &c.	Hon. Mention
Evans, Edward, Denbigh, North Wales, Bluestone	Hon. Mention
Fry, J. S., & Sons, Bristol, Chocolate and Cocoa	Gold Medal
Glenboig Fire-clay Company, Glasgow, Chemical Apparatus	Silver Medal
Glover, H., Son & Co. (Limited), Bradford, Soap, Washing Powder, &c.	Bronze Medal
Goulding, W. & H. M. (Lim.), Dublin, Chemical Manures	Bronze Medal
Gray, Joseph, & Co., Sheffield, Surgical Instruments	Silver Medal
Griffiths, Fletcher & Berdoe, Liverpool, Zinc White	Silver Medal
Hickisson, J. (Bond's), London, Marking Ink	Hon. Mention
Hudson, R. S., West Bromwich, Liverpool and London, Extract of Soap	Silver Medal
Keen, Robinson & Co., London, Mustard, Barley, Groats, &c.	Gold Medal
Kent, G. B., & Co., London, Brushes	Silver Medal
Kilner Brothers, London, Glass Bottles	Silver Medal
Levenstein, L. J., & Co., Blackley, near Manchester, Aniline Dyes	Silver Medal
Mackay, J., & Co., London and Edinburgh, Essences from Fruits, &c.	Bronze Medal
Mackay, J., & Co., London and Edinburgh, Varnishes and Polishes	Hon. Mention
Mander Brothers, London and Wolverhampton, Varnishes	Silver Medal
Mawson & Swan, Newcastle-upon-Tyne, Photographic Chemicals	Bronze Medal
Mayer & Metzler, London, Surgical Instruments, &c.	Silver Medal
North British Chemical Company (Limited), Glasgow, Chemicals	Silver Medal
Patent Plumbago Crucible Company, Battersea, London	Gold Medal
Pears, A. & F., London, Transparent Soap	Silver Medal
Pillischer, M., London, Optical Instruments	Silver Medal
Price's Patent Candle Company, London, Candles, Soaps, Oils	Gold Medal
Readman, J. B., Glasgow, Chemicals	Bronze Medal
Rimmel, E., London, Perfumery, &c.	Hors Conc.
Rowland, A., & Sons, London, Perfumery, Kalydor and Odonto	Hon. Mention
Savory & Moore, London, Chemicals, &c.	Silver Medal
Smith, T. & H., Edinburgh, Products of Opium, &c.	Gold Medal
Spence, Peter, Manchester, Alum, &c.	Gold Medal
Tennant, Charles, & Co., Glasgow, Alkali and Bleaching Powder	Gold Medal
Tyler, Hayward, & Co., London, Aërated Water Machinery	Gold Medal
Tyne Alkali Company (Limited), Newcastle-upon-Tyne	Bronze Medal
Young's Paraffin Light and Oil Company (Limited), Glasgow and Edinburgh	Silver Medal

A Gold Medal has also been awarded to Messrs. Spottiswoode & Co., for the superiority of their printing. Their case included specimen copies of THE CHEMIST AND DRUGGIST, *The Ironmonger*, the *European Mail*, the *Saturday Review*, and books in Oriental languages.

ON THE COLLECTION OF BALSAM OF PERU.*

BUSINESS engagements took the writer sufficiently near the Indian town Cuisnagua, one of the best-known centres of the balsam industry, to make a visit to it feasible. The balsam is collected only in the area bounded by lines passing through the harbour of Aeajutla, the towns of Isalco and Santa Teela (New San Salvador), and the harbour La Libertad. Outside this area single trees may be found, but no balsam is collected; nor is any of it prepared on the sea-coast, but in mountainous uplands some miles from the sea. The balsam tree is much like the European oak, but its bark is smoother, and more like that of the walnut; the leaves are mostly small. Only one species is met with on the Balsam coast. The *Myroxylon Pereiræ* will live a hundred years, if not killed by external causes. In their native district balsam trees for generations have formed the only property bequeathed by the father to his children. They produce balsam all through their life, but begin to yield abundantly at 25 to 30 years, when they flower for the first time. They yield balsam from December to June every year, but most largely in dry seasons. In the time of flowering (February to March) the production ceases. The colour of the juice differs with the age of the tree. When young it is greenish-yellow; when old, a chestnut brown. The leaves contain an aromatic oil; the seeds, a very small quantity of yellowish resin, which is extracted with alcohol, and sold in the pharmacies of the Balsam coast as *Balsamito* or *Balsamo Catolico*. It is highly esteemed as a remedy for various external and internal ailments.

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* Abstracted from a letter from Theophil Wyss, Apotheker, in San Miguel La Union San Salvador, to Professor Flückiger, published in No. 119 *Pharmaceutische Handelsblatt.*

The balsam harvest generally takes place only in the dry season. After the close of the rainy season (December) the trees are prepared. At the new moon the bark is lightly beaten in twenty or thirty places from once to three times the size of the hand, with the back of an axe-like instrument called *hacha*. After eight days, when the beaten bark has become loose, and separated itself from the wood, it is cut away with the *hacha*. At this time cleaned rags of all descriptions are applied to the wounded parts, and absorb the yellow juice which exudes. After two applications of the rags, each lasting eight days, the wounded places are set on fire by means of a kind of resinous reed called *hachones*, and allowed to burn for a few minutes, and then extinguished. If allowed to burn longer a general conflagration might ensue, for the sap is very inflammable; this is one reason why the rags are first applied without burning the wounds. The application of the rags, and their renewal every eight days, is continued after the burning. Sometimes in the month of April the wounds are again set on fire. This burning and heating causes the tree to produce balsam purer and more abundantly. Before it the juice that flows is yellowish and impure; afterwards it is purer—a blackish oil or balsam.

The rags saturated with balsam are boiled for a quarter to half an hour with some water in an earthen cooking pot; part of the balsam remains with the water in the pot, the rest remains in the rags, and is wrung out as a washerwoman wrings water from wet linen. The hand-presses used consist of a half-open sack or net, about 15 inches long and made of coarse cords joined by smaller cords. At each end is a hole like the eye of a needle, in which a stick is placed. After the rags are placed in the net one stick is fastened between two steady posts, and with the other the whole is twisted. The expressed balsam is added to what remains in the pot, and after settling the water is poured off and impurities taken away. This product is called *Balsamo Bruto*, and in this condition it is filled into *tecomates*, or gourds. These are wrapped in plane leaves, and either sold (generally at 5 reals or 3f. a pound) to brokers, or carried for exportation to the nearest town, whence it is shipped in glass or sheet-iron vessels of 25 to 100 pounds. The expressed balsam is somewhat impure, and must be purified. This is effected either by allowing it to settle in a larger earthen vessel and skimming off the impurities with a spoon (*purificacion cruda*); or the balsam is heated without water and continually stirred, the impurities being removed as they rise to the surface (*purificacion à fuego*—purification by fire). The balsam which exudes before the firing of the wounds must always be purified by the latter process before mixing it with the rest. This is called rag balsam (*Balsamo de Trapo*), to distinguish it from a second kind called *Tacuasonte* (extracted without fire) or *Balsamo de Cascara* (bark balsam). This is made by boiling the chopped bark with water, expressing it in the usual way, and submitting the product, which looks like honey, to the *purificacion à fuego*: it is then mixed with the rag balsam. This process gives undoubtedly a larger yield than the others, but it is strictly prohibited on account of the inferior quality of the product and the serious injury to the tree. It is only practised secretly, mostly during the rainy season. A place named Teotepeque, lying very near the coast, is largely given up to the preparation of this kind of balsam, most of which is brought to Sonsonate and shipped from the port of Acajutla. The average yearly yield of balsam from one tree is about two pounds.

The balsam is doubtless often adulterated before shipment. A certain *Melassen*, a decoction of the plant *Justicia purpurea*, and even chicken broth, are mixed with it. Castor oil also serves to adulterate it.*

CARLSBAD SALT.

(*Sal Thermarum Carolinarum*—Latin. *Karlsbader Salz*—German. *Sel de Carlsbad*—French.)

THERE are nine springs of thermal water in Carlsbad: The Sprudel, discovered 1347 by the Emperor Charles IV. in hunting a stag, has a temperature of 165–167° Fahr.; the Hygieaquelle, of the same temperature; the Bernhardsbrunnen, of 156–160° Fahr.: the Neubrunnen, of 140–142° Fahr.; the Mühlbrunnen, of 133° Fahr.; the Ferdinandsquelle, 127° Fahr.; the Theresienbrunnen, 124° Fahr.; the Schlossbrunnen, 116° Fahr., and the Spitalquelle, 113° Fahr.

The ingredients of the different springs are about the same, only the amount of carbonic acid varies according to the different temperatures. The first analysis was made by Dr. Becher, 1789, who proposed also to prepare the salt by evaporating the water by means of the heat of the springs. In July, 1793, Klaproth found in 100 cu. in. = 29,333 grains:

	Grains
$NaOCO_2$	39
$NaOSO_3$	$70\frac{1}{2}$
$NaCl$	$34\frac{5}{8}$
$CaOCO_2$	12
SiO_3	$2\frac{1}{2}$
Fe_2O_3	$\frac{1}{8}$
	$158\frac{7}{8}$
CO_2	32 cu. in.

Berzelius found in 16 oz. of the water:

	Grains
$NaCl$	17·9758
$NaOSO_3$	19·8691
$NaOCO_2$	9·6950
$CaOCO_2$	2·3700
$MgOCO_2$	1·3696
$FeOCO_2$	0·0278
CO_2	7·0000
	58·3073

Nentwich, and later, Von Creutzburg found besides

	Grains
KI	0·0184

Göttl's analysis, 1856, differs from these. It is:

	Grains In 16 ozs.
$KOSO_3$	9·3696
$NaOSO_3$	14·9605
$NaCl$	8·7245
$NaOCO_2$	9·0624
$CaOCO_2$	2·0198
$MgOCO_2$	0·3994
$FeOCO_2$	0·0307
Al_2O_3	0·0125
SiO_3	0·0520
	44·6415
CO_2	1·2787

Besides traces of I. Br. As. Cr.

In evaporating the water, the salts soluble only in the presence of free carbonic acid, as the carbonates of magnesia, lime, and iron, are precipitated, and the crystallised salt contains sulphate of soda, sulphate of potash, chloride of sodium, and carbonate of soda, the two latter being more soluble than the former and in smaller quantities.

About four years ago I analysed six samples of Carlsbad salt, and was very much surprised to find that all six consisted merely of sulphate of soda with traces only of sulphate of potash, carbonate of soda, and chloride of sodium. Last week I analysed again the natural salt, and found it to consist of:—

	Grains
$NaOSO_3$	43·371
$KOSO_3$	1·313
$NaOCO_2$	0·516
$NaCl$	Traces
H_2O	51·800
	100·000

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* The statements with respect to the falsification of the balsam seem to me very doubtful; the chief adulteration, though probable, is but rarely met with, and most likely takes place first in Europe.—Prof. Flückiger.

As the price of sulphate of soda is about 1*d*. per lb., the price of Carlsbad salt 6*s*. 6*d*. per lb., I resolved to prepare the latter myself, and offer it to my customers as artificial Carlsbad salt.

Different prescriptions exist for the preparation of it. Those given by Dr. Hager and the former Hamburg Pharmacopœia are nearly alike, viz.:—

	Parts
Sulphate of soda	3
Carbonate of soda	2
Chloride of sodium	1

Dissolved in water, evaporated till a pellicle has begun to form, and allowed to crystallise.

In the mother liquor are again dissolved 3 parts of sulphate of soda, and the obtained crystals are mixed.

It is impossible to preserve in a good state the salt prepared in this way. Even kept in stoppered bottles, filled to the neck, it decreases in volume, the crystals in the upper part sticking together so firmly that force has to be employed to bring them out again, whilst the crystals at the bottom become first deliquescent, then crystallise again and break the bottle. To avoid this inconvenience and keep the salt in a dry and good condition I operate as follows:—In about 10 lbs. of water I dissolve 2 lbs. of chloride of sodium, heat to a temperature of 92° Fahr., and keep at the same, adding gradually 25 lbs. of sulphate of soda, 1 lb. of sulphate of potash, and 3 lbs. of bicarbonate of soda, filter through calico, and set aside to crystallise. To the mother liquor heated and kept at a temperature of 92° Fahr. I add again sulphate of soda as much as will be dissolved, and allow to stand until crystals are formed, which, collected, drained, and dried at an ordinary temperature, are filled in bottles. The salt so obtained presents colourless transparent crystals, and can be kept in that condition any length of time.

H. W. LANGBECK.

THE SALE OF FOOD AND DRUGS ACT.

THE CHEMIST AND DRUGGIST has, we must admit, got some good ground of complaint in the fact that in the quarterly reports of some analysts such expressions are found as that "two samples of drugs were found entirely wanting of their principal ingredients;" "five samples, three adulterated;" and so on, while no prosecution has followed to test the correctness of these statements. We decidedly agree that, were the analysts the prosecutors, no articles should appear as adulterated in the quarterly reports unless the cases had been fully taken before the court. Our contemporary, however, should remember that it sometimes happens that, for occult reasons only known to themselves, a local authority will not institute a prosecution even when the article is found bad. In such a case the analyst has no option, and he cannot withdraw the mention of the case from his quarterly report. Setting aside disputed questions of nomenclature and recognised strengths, the only real cases of absolute admixture of drugs that ever came under our notice were one of a sample of powdered jalap, containing linseed flour, and one of sulphate of quinine, containing more than 90 per cent. of the other cinchona alkaloids. The former article was, it turned out, purchased, not of a chemist, but at a small oil-shop, and, notwithstanding the certificate, the authorities declined to prosecute, on the ground that the oilman, not understanding drugs, knew no better! Doubtless the case afterwards appeared in the quarterly report, but what could the analyst do to prevent it? The latter case certainly should have been made the ground of prosecution. This appears just one of the points to be considered in any amendment of the Act, and THE CHEMIST AND DRUGGIST does well to record it; only do not let the blame be thrown on the analysts personally for what they cannot help. If the Government would give the pharmacists an absolute monopoly of the sale of all drugs—a monopoly to which, as men of education, they are now as much entitled as their German compeers, and, in return, insist that nothing should be sold except in accordance with a definitely-recognised scale of purity, &c.—it would put an end to much trouble and misconception.

On the other hand, some authorities will rush blindfold into prosecution on matters which never ought to be taken into court. An analyst is often snubbed when he makes the remark on his certificate that such and such a result does not give a good ground for proceedings, and is told plainly to mind his own business and leave them to judge. The result is that such really trivial cases as the recent slight deficiency in the alcoholic strength of a sample of tincture of jalap are brought into court. Our view is that in such a difficulty the analyst might address a letter to the inspector, saying that, if asked his opinion on oath, he would state that he did not consider the deficiency of any real importance. If, then, the prosecution was brought, the analyst could publicly wash his hands of the whole affair. The only difficulty would be when his re-election came on. And if any board could be found to object to such a letter, we say—Let them.—*The Analyst.*

RIVAL FILTERS.

IN the *Analyst* for October Mr. G. W. Wigner records a series of experiments with which he has amused his holiday hours at Margate this past summer. The water there, he says, is "contaminated by infiltration from the sea, has a very unpleasant smell and taste, and the microscope shows a variety of objects which might be more readily passed in surface drainage than in drinking water." These advantages rendered it very suitable for experiments with filters. He procured the two most noted of these, buying each direct from the makers. They were the "Silicated Carbon" and the "Spongy Iron." These were allowed to work for about five weeks before the experiments were commenced. Mr. Wigner then explains the construction of these filters. "The principal mechanical advantage of the Silicated Carbon is—that the filtering body is a porous slab, cemented into the stoneware—so that it is impossible for any portion of the liquid to escape without passing through the entire thickness of the filtering material. The advantage of this is obvious, while the fact that this porous slab is effectively aërated every time the filter is allowed to run dry is no small advantage. On the other hand the speed of filtration cannot be regulated, and in practice it is somewhat irregular. In the Spongy Iron filter the regulation of the speed of filtration, though somewhat troublesome to the user, is very efficient; but owing to the very coarse grain of the principal filtering material it is not only possible but probable that a good deal of the water escapes without having been subjected to the influence of the spongy iron at all. The rate of filtration is much slower than in the silicated filter."

During all the time that the filters were in use the silicated water was always preferred for table use. Even those who were entirely ignorant of the fact that filters were used would sometimes complain of a flat taste in the spongy iron water.

The author records his experiments, which he afterwards summarises thus:—

Both filters have equally removed the yellow-green colour of the water, and the suspended matter.

The silicated filter has greatly reduced the smell, but the spongy iron has merely changed its character, so that instead of resembling decaying vegetable matter it is a sort of indescribable smell, perhaps more resembling the smell of impure hydrogen produced by the action of acid on iron than anything else; but of course very faint, though offensive.

The taste has apparently been affected in a similar way. The silicated removed the offensive taste, and left only the saline. The spongy iron left the saline, but added to it a taste a little worse than if the water had been boiled, that is, there was something besides the flat taste. Bischof has alluded to a gas which he has observed within the bulk of spongy iron after it had been in use some time, which gas he says is sometimes explosive, sometimes not, and on one occasion he found this gas to contain a hydro-carbon; may not this hydro-carbon be the cause of this smell and taste?

The effects on the hardness are singular. The silicated reduced the temporary hardness by 6·2°, and the permanent hardness by 4·1°, total reduction 10·3°. The spongy iron reduced the temporary hardness by 15·5°, but only reduced the permanent hardness by a decimal. The spongy iron therefore reduces the total hardness the most, but bearing in mind the greater importance of permanent hardness, there is probably little to choose.

It is remarkable that the reduction of total mineral matter does not more closely follow this reduction of hardness. I have not yet made full mineral analyses of the residues to determine this point.

It is, however, in the ammonia and albuminoid ammonia, which are so often viewed as almost the sole proof of purity or otherwise, that the most important results appear. The silicated removes even the small proportion of albuminoid ammonia which was present, but the spongy iron produces a very marked proportion of free ammonia and so much albuminoid ammonia that the water would probably be condemned by those who trust mainly to that determination.

This result is a serious one in whichever light we view it. If the albuminoid ammonia determination is of value, then *pro tanto* the filtered water is worse than the unfiltered. If the filter is a good one, and certainly many other experiments have pointed out that it is, then any analyst who reported on such a water, in ignorance of the fact that it had been through spongy iron, might be deceived. But still further, if spongy iron acts in this way, is it possible that metallic iron may in a less degree?

In considering this point all the special circumstances of the case must be borne in mind. For instance, the very saline character of the water, and the fact that this salt is partly due, in all probability, to infiltration from the sea; but still the fact remains.

It is right to add that Mr. Wigner has especially qualified himself for such an investigation as this by the long series of analyses of the water supply of our fashionable towns, which he carried out for the *Sanitary Record*, and to which we have previously directed attention.

THE IATRO-CHEMICAL SCHOOL OF MEDICINE.

By W. B. A. Scott, M.D.

(*This paper is a continuation of one on "Van Helmont and the Iatro-Chemical School of Medicine," which appeared in our May number.*)

THE labours of Des Cartes did much to banish from the iatro-chemical school the spiritualistic element, which, had it persisted, would have gone far towards repelling the attention of men of science on the very threshold; and that profound philosopher, by directing notice to the wondrous effects directly ascribable to the mere mechanical constitution of the body, helped to introduce into the doctrines of the iatro-chemists an important principle without which their system must ever have remained one-sided. At the same time, the first to give the iatro-chemical system a regular form was Francis de la Boe Sylvius, who, unfortunately, paid but little regard to the teaching of Des Cartes. At the same time, his services to medical science were neither few nor small. That he was a man of real genius is acknowledged by all; he was also an excellent anatomist, having made important discoveries respecting the lymphatic system, the brain (where, however, the "fissure of Sylvius" and "aqueduct of Sylvius" are said to commemorate the researches, not of our hero, but of his celebrated predecessor, Jacobus Sylvius, instructor of Vesalius, and restorer of the scientific study of anatomy at Paris in the preceding century[*]), and the ear; he has some good remarks on the operation for hare lip; and, what is still more to the purpose, was the first in modern times to deliver "clinical lectures," and, like his predecessor Van Helmont, strongly insisted on the necessity of autopsies. He was born in 1614; studied and practised at Amsterdam, where he became familiar with the doctrines both of Des Cartes and Van Helmont; was promoted in 1658 to the chair of medicine at Leyden, where he acquired such fame that Boerhaave alone was subsequently recognised as capable of being his rival, and died in 1672—the same year as his great opponent, Guy Patin, of Paris.

Having here introduced the name of Guy Patin, the most celebrated enemy of the iatro-chemical school, it will be well before proceeding further to discuss the characteristic doctrines of that system, to glance at the way in which it was regarded by contemporary outsiders. In the first place, the derisive epithets "chemikers" and "medicastres chemistes" were first applied to votaries of this school, not, as might have been supposed, from their chemical theory of therapeutics (treating so-called "acid" diseases by means of alkalis, and "alkaline" diseases by means of acids, though this was the characteristic doctrine[*] of Sylvius), but on account of their employing as remedies the powerful chemical drugs—particularly antimony—which had been introduced by Basil Valentine, Paracelsus, and Van Helmont. So violent was the opposition of the orthodox party to these innovations that in 1615 the Royal College of Physicians of Paris unanimously passed a decree in which "chemical medicines were condemned, and interdicted from all pharmacopœias, while all judges were implored to inflict severe chastisement on all who prescribed or administered those poisonous medicines." To the use of these Guy Patin never fails, where possible, to ascribe the death of the patient. Thus he says, "The Duchess of Lorraine has just died here of *sorrow and antimony.*" . . . "The Count d'Alais fell sick; *one of us* said he must be bled, but a Provençal 'chemiste medicastre' refused, and gave him antimony. The deadly vapour of this quickly put an end to him, and, *drunk with the stibial draught, he had to drink the Stygian water.*" . . . . "Antimony, which is hardly ever spoken of here except with hatred, got a deadly blow yesterday (1654) by the death of a daughter of one of the members of the council of the court, who died, aged 14, *carried off by a double dose of antimony.*" Instances of this kind of language could easily be multiplied.[†]

To come now to the doctrines of Sylvius. The physical functions, digestion in particular, he explained on purely chemical principles, the "ferments" of Van Helmont forming the basis of his system. And, just as his predecessor spoke of a "duumvirate" of the solid organs, so, in equally fanciful language, Van Helmont spoke of a "triumvirate" of the fluids—the saliva and pancreatic juice, both of which, following Regnerus de Graef, he erroneously regarded as acid, and the bile, which he considered alkaline. He is less minute than Van Helmont in his description of the digestive process, referring only (1) to the mixture of the three above-named fluids; (2) to a further process in the lymphatics; and (3) to another in the spleen, in which latter, he says, the process of sanguification is "more than completed" (*plusquam perficitur*). All the various secretions exist as such in the blood, the solid parts exerting no influence either on their formation or elimination. We hear no more of the *Archæus*, but do not quite get rid of "volatile spirits." Thus, we are told the chyle consists of the "volatile spirits" of the aliment, united with a fine oil, and an alkali which has been neutralised with a weak acid. The "vital fire" which causes the circulation of the blood arises from the effervescence of the volatile oleaginous salt of the bile with the neutralised acid of the lymph. This "vital fire" differs from ordinary fire, and acts on the blood, not in virtue of its heat, but because it consists of "pyramidal particles"—an idea evidently taken from the Cartesian philosophy. The "vital spirits," prepared in the brain by a distillatory process, resemble in their properties spirits of wine. These, indeed, travel along the nerves, but not exclusively, for they diffuse themselves through all parts of the body, induing these with sensation. In the glands generally, by admixture of the acid contained in the blood, they develop a naphtha-like fluid, which forms the lymph. The milk is formed in the breasts by the admixture of a weak acid, which whitens the blood. The "gas" of Van Helmont he designated "halitus."

In strict consistency with this chemical physiology are the pathology and therapeutics of Sylvius. He introduced the word "acridity" (Schärfe), by which he designated the proximate cause of all diseases; this "acridity" may be acid or alkaline. Hence, there are just two leading classes of disease; those depending on an acid, and those depending on an alkali. It is true that he recognised varieties in these acids and alkalis, but Kurt Sprengel is quite justified in saying that Sylvius "did not trouble himself about the ultimate causes of the alkaline or acid states, shut his eyes to the influence of the solid organs, and degraded the body to a mere mixture of juices in a constant state of fermentation, effervescence, precipitation, or distillation—lowering the physician, at the same time, to the rank of a mere chemist, or even of a vintner, brewer, or vinegar-manufacturer.

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[*] This Sylvius was a devoted Galenist, and an amusing story is told of his bigoted adherence to the doctrines of the old physician of Pergamos. Vesalius having stated that the *sternum* ought in reality to be divided into only *three* portions (*manubrium*, body, and *xiphoid cartilage*), instead of the *seven* recorded by Galen, and explaining Galen's error from his dissection having been performed on asses, not on human beings; Sylvius replied this was not so, but "in Galen's time human beings were taller, and so had seven segments in the sternum, although the dwarfish race of the sixteenth century had only three." A better defence would have been, that, if "centres of ossification" be referred to, Galen was nearer the truth than Vesalius. The regular number is five, but there are often one or two more.

[*] It will be remembered that Van Helmont expressly repudiated this doctrine, which subsequently became the therapeutic dogma of the school which owed its origin to him.

[†] The above are taken from Dr. J. R. Russell's "History and Heroes of the Art of Medicine."

"The bile, in the first place, assumes a complicated 'acridity' when the system is affected by bad food, impure air, &c. This 'acridity' may be acid or alkaline; in the former case it becomes thickened, and produces obstructions; in the latter case it engenders febrile heat, and the ascending exhalations cause febrile shivering. . . . . Faulty admixture of bile in the blood produces jaundice. . . . . Faulty effervescence of the pancreatic juice with the bile is the cause of nearly all other diseases" (*i.e.*, all except continued fevers and jaundice). "Intermittent fevers, however, arise from obstructions to the glandular ducts caused by [excessive] acidity of the pancreatic juice. A greater degree of acidity of the same gives rise to hypochondriacal and hysterical pains. Fainting, palpitation, and other nervous symptoms arise from the ascent of an adhesive, acid exhalation, caused by a faulty effervescence of the bile and pancreatic juice. Convulsions and cramps arise from deposition of the 'acid acridity' of the pancreatic juice or lymph on the nerves. Epilepsy is caused by acid exhalations [similar to those which cause fainting, &c.]. The cause of gout is the same as that of intermittent fevers" (Kurt Sprengel, *Geschichte der Arzneykunde*, vol. iv., p. 343). The only diseases ascribed to the "alkaline" diathesis are malignant fevers. Nervous diseases may be ascribed to defects in the "vital spirits;" still, even these are only to be considered in connection with the concomitant peccant acid or alkaline humours. The above may suffice as a specimen of the pathology of Sylvius.

On this was based his system of therapeutics. "Acid" diseases are to be treated with alkalis, such as hartshorn and the like; 'alkaline" diseases with acids, to which, for some reason best known to himself, he adds opium. He also directed that the excess of peccant humours should be removed by means of purgatives, diaphoretics, as antimony, &c., &c. In malignant fevers he recommended the following:—

Theriac veter.	ʒij.
Antim. diaphor.	ʒj.
Syrup. card. bened.	℥ij.
Aq. prophylact. Sylv.	℥j.
Aq. cinnamoni	℥ss.
Aq. scabios.	℥ij.

No attention whatever was paid either to the period of the disease or the character of the epidemic. He gives the most heterogeneous reasons for the administration of alkalis. At one time he tells us they "alter" the acid state of the bile; at another, it is on the pancreatic juice they are said to act; further on, we are told they remove the sluggishness of the vital spirits; in a fourth place, he says they act in virtue of their diaphoretic properties; fifthly, that they favour secretion generally sixthly, that they favour menstruation.

Notwithstanding the opposition which we have seen this school met with, it is really surprising how long it was before anything like a scientific confutation of its principles appeared. The Parisian school, indeed, under the presidency of Riolan, long kept itself free from the novel doctrines, but its conduct simply amounted to unreasoning persecution, while that of Guy Patin, in particular, simply amounted to unreasoning invective. Louis le Vasseur, Herman Grube, Drelincourt, and Leichner opposed the principle, or individual details, of the new system by arguments borrowed from the old Greek and Roman physicians, and by no means improved in the borrowing process. Florentius Schuyl, of Leyden, on the other hand, quoted from the pseudo-hippocratic treatises in favour of iatro-chemistry. In Spain the new system found but little favour; even there, however, it was adopted by Kaspar Bravo de Sobremonte y Ramires, of Valladolid, to some extent, but only in conjunction with the old "dogmatic" theories.

In England the iatro-chemical system found zealous defenders in Walter Charleton, and the more celebrated Thomas Willis. The latter, indeed, introduced various modifications of his own; his language, in some respects, more closely resembling that of Paracelsus than that of Van Helmont. He accepted the three Paracelsian elements, merely substituting the term "spirit" for that of "mercury." Like Paracelsus, he ascribed to this the property of volatilising the components of the body; salt is the basis of the "fiery" properties of the frame; sulphur produces colours and warmth, and holds the "spirit" in combination with the salt. There is an acid ferment in the stomach, which, together with the sulphur of the food, forms the chyle; this latter effervesces in the heart "*because sulphur and salt take fire when combined*," and so gives rise to the all-pervading vital flame. The "vital spirits" originate in the brain by a genuine process of distillation; in the vessels of the testicles an "elixir" is engendered from the particles of the blood; while in the spleen the earthy part of the same is retained, an additional ferment being thereby formed, which is subsequently added to the blood. The blood is eminently predisposed to fermentation, and therein comparable to wine. Every fluid in which any one of the three elements preponderates in a particular manner is to be called a ferment. All diseases arise from defects in these ferments, and a physician is therefore to be compared to a vintner, the duty of each being confined to regulating the fermentative processes in the objects of their care. Fever arises from a strong effervescence of the blood and other juices, due partly to a "ferment" and partly to external causes. Cramps and convulsions arise from "explosions of salt and sulphur with the animal spirits;" hypochondriacal and hysterical pains from deficient purification of the blood in the spleen. He strongly recommended diaphoretics, on the ground of their being "cardiac tonics," but differed from other iatro-chemists in sanctioning the occasional use of blood-letting.

Although Nathaniel Highmore had a zealous dispute with Willis respecting the seat of hysteria and hypochondria, the former, too, must, in all essentials, be reckoned among the iatro-chemists. John Rogers only differed from Van Helmont in recognising but five, instead of six, digestions, which he named respectively chylosis, chymosis, hæmatosis, pneumatosis, and spermatosis; while Francis Cross endeavoured to combine the humoral pathology of the old dogmatists with iatro-chemical doctrines.

The first serious shock which the new system received was at the hands of the celebrated Robert Boyle, who in some respects was not unfavourable to the doctrines of Van Helmont, though more inclined to those of Des Cartes. He pointed out the insufficiency and uncertainty of the Sylvian hypothesis about acids and alkalis, though he himself fell into hardly more satisfactory speculations respecting the form of the ultimate atoms.

In Germany, while Martin Kerger, a physician at Liegnitz, declared himself the exclusive champion of the new system, its errors were exposed by Hermann Conring, the most learned physician of his time, who justly remarked that the legitimate application of chemistry was rather to pharmacy than to physiology, pathology, or therapeutics. Orlaus Borrich, of Copenhagen, attempted to answer him, the new system having met with great favour in that city, owing to the advocacy of Bartholinus, professor of anatomy in the University of Copenhagen. Subsequently a system compounded of the physiological doctrines of Des Cartes and the therapeutical system of Sylvius was vigorously defended by Wedel of Jena and Ettmüller, of Leipzig. Its most distinguished opponents were Bohn, Boerhaave, and Hoffmann. For a long time iatro-chemistry prevailed in the Netherlands with little or no opposition.

The new system was introduced into Italy by Tachonius, of Herford, in Westphalia; and in order to procure the readier acceptance for his doctrine in a country wedded to the ancient "dogmatism," he endeavoured to show not merely the harmony, but the identity, of the same with that of Hippocrates, and even to prove that the Father of Medicine was the true founder of the iatro-chemical school. By availing himself freely of the pseudo-hippocratic treatises he was enabled to make out at least a plausible case. He further sought to identify the "acid" of the "chemikers" with the "fire," and the "alkali" with the "water," of the ancients, in which he was followed by Pascoli, who, moreover, identified the "spirit" of Sylvius (*i e.*, the "mercury of the Paracelsists") with the "æther" of the "dogmatists." As might have been expected, this harmonising process soon introduced great modifications into the doctrines and practice of the iatro chemists; thus, blood-letting again came into favour, even Portal, who remained in general its earnest opponent, advising it in cases of congestion of the "nobler parts." Volpini, however, adhered to the doctrines of Van Helmont on this subject. The majority of Italian physicians were strenuous supporters of the "acid" and "alkaline" theories, but how little they really understood the subject clearly appears from the fact that Pascoli maintained quicklime must contain some acid *because it effervesces with water.* Bellini and Gulielmini sought to construct a system by combining the doctrines of the iatro-mathematical with those of the iatro-chemical school; and hardly any except Sanguinetti and del Papa declared themselves direct opponents of the latter after it had obtained a footing, until the beginning of the 18th century.

In France, where this school was at first so vehemently opposed, it ere long gained more adherents, but, at the same time, underwent even more modifications, than in Italy. Thus many of the Montpellier school propagated its doctrines by their writings. Faber, of Montpellier, used the very words of Van Helmont himself about the "wrath" of the *Archæus*, &c. Calmette, also, and Massard were unqualified supporters of the same.* Barheyrac sought to unite the theories of Des Cartes and Sylvius. An "iatro-chemical academy" was founded in Paris by de Blegny, in 1691, in which a composite system, like that of Barbeyrac, was chiefly taught. St. André sought to establish the harmony of the new doctrines with those of the ancient "dogmatists." Beddevoli and Gavet sought to give more precision to their system by distinguishing different *degrees* of "fermentation," the former recognising five grades. In the then imperfect state of chemical knowledge, even the direct researches of Viridet and Vieussens† to furnish chemical evidence of the alleged "acids," &c., in the fluids only procured greater support to the school. One of the latest adherents of the system—and a most strenuous one, too—was Falconet, a pupil of Sylvius' old enemy, Guy Patin. But here, as in Italy, the attempts to harmonise antagonistic schools introduced such modifications both of theory and practice—the revival of blood-letting for example—that the later iatro-chemists possessed little of their predecessors, except the name.

In England, the writings of Boyle, Pitcairn, and others, together with the high reputation of Sydenham, ere very long gave the death-blow to the iatro-chemical system, after it had passed through modifications similar to those it underwent in Italy and France; a result to which the increasing knowledge of chemistry greatly contributed.

It would be unjust to deny that the *antipathic* and chemical doctrines of this school are occasionally directly applicable in medical practice, though they could never form the basis of a rational system. Thus, in rheumatism, a disease characterised by an "acid" state of the blood, the alkaline treatment has often been found useful, at least as a palliative, and as tending to prevent deposition of solid matter on the cardiac valves. In gout, again, and gravel, we give, with at least temporary advantage, carbonate of lithia, the urate of lithia being a very soluble solid, easily eliminated by the emunctories. Attempts, too, have been made to dissolve vesical calculi by chemical means. But in all these cases, it is evident, we but seek to remove the *products of disease*, which, however useful, is evidently very different from rectifying the *diathesis* on which the production of these depends. Van Helmont himself fully recognised this, when he said, in his mystical language, that the affections of the *Archæus*, and not the products thence resulting, were the proper subject of attack—a fact too much overlooked by most of his successors. A late justly eminent physician and chemist was sometimes accused of too great a proneness to treat disease on purely chemical principles; but a wiser and more philosophical spirit generally prevails, and a return of the absurd theories and practices of the iatro-chemists is no more a just object of apprehension than the re-introduction of the mystical jargon of the Rosicrucians.

LIST OF FOREIGN MEDICINES

Ascertained by the Commissioners of Inland Revenue to be (among others) generally sold in this country without medicine stamps, but declared by them to be liable to the tax as well as all other foreign medicines, except those which can be shown to be drugs pure and simple, and which are sold as such:—

Pâté de Regnault
,, de George
,, de Blayn
,, de Nafé
,, de Zed
,, d'Aubergier
,, de Berthé
,, de Lagosse
,, de Vial
,, Pectoral d'Escargots
Pastilles de Burin de Buisson
,, de Paterson
,, de Dethan
,, de Belloc
,, de Dusart
,, d'Elatine Beral
Dragées de Blot
,, Gelis el Couté
,, Rabutean
,, Beral
,, Brom. Camph. (Clin.)
,, d'Ergotine de Boneau
,, de Labelonye
,, Grimault, Drag. de Lamomeye
Capsules de Ricord
,, Laroze
,, Bro. Camph. (Clin.)
,, Mothes (2 kinds)
,, Theveuot (all sorts)
,, de Raquin
,, de Matico
,, de Goudron de Guyot
,, de Vial
,, de Grimault (all sorts)
,, de Mathey-Caylus (all sorts)
,, de Follet
Pilules de Quina Laroche
,, Dehaut
,, Palmerstou
,, Cronier
,, Frary
,, d'Apiol
,, de Laville
,, de Churchill
,, de Vallet
,, de Blancard
,, de Fer Bravais
Grains de Santé
Poudre de Patterson
,, de Morrhuine
Charbon de Belloc
Fruit Julien
Eau de Lechelle
Injection Chable
,, Matico
,, Bron
Sirop de Flon
,, de Nafé
,, Lamoureux
,, Laroze
Sirop Raifort Iodé (Grimault)
,, Depuratif de Laroze
,, de Chassaing
,, de Vanier
,, de Blayn
,, Roh de Boyveau Lafecteu
,, de Berthé
,, de H. Mure (all sorts)
,, de Leras
,, de Lagasse
,, d'Aubergier
,, Chloral Follet
,, Dusart (all kinds)
,, Docteur Delcau
,, Churchill (all kinds)
,, Declat's (all kinds)
Elixir de Gage
,, Laroze
,, Tonique Antiglaireux
,, ,, de Quinquina and Cacao
Brust Boubons
Granules Pappillaud (all kinds)
,, Grimault (all kinds)
,, Garnier and Lamoureux (all kinds)
,, Chanteaud (all kinds)
Liqueur de Laville
Werlhoff's Sulphur
Perles de Clertan (all kinds)
Saccharure d'Aconit
Tolu de Tournois
Odet's Solution
Papier Fayard
,, Royer
,, Epispastique d'Albespeyres
,, Weinski
,, Lardy
Mouches de Milan
Thé Suisse
,, Chambard
Gaufrettes Purgatives
Biscuit Purgatif
Vin de Quinquina Ferrugineux
,, d'Ossian Henry
,, de Grimault & Co.
,, de Saint Denis
,, Quinquina Iodé
,, de Chassaing
,, Tonique Marrani
,, de Bellini
,, de Seguin
,, de Dusart (all kinds)
Quinium Labarraque
Goudron de Guyot
Quina Laroche
Solution de Dnsart
Elatine
Eau des Carmes
Emplatres de Thapsia
Thevenot's Globules

Pharmaceutical Chemistry.

Liquid Camphor.—M. Wreden announces that he has converted ordinary camphor into a liquid isomer by the action of dilute hydrochloric acid at 190°. The new compound boils at 187° to 193°. Its sp. gr. equals 0·913, and it does not crystallise at a temperature of —17°.

Detection of Alcohol in Essential Oils.—The *Apotheker Zeitung* publishes a simple method for accomplishing this purpose. A carefully-graduated tube is half filled with pure anhydrous glycerine. It is then filled up with the oil to be tested, and well shaken. After standing any increase in the volume of the glycerine corresponds to the proportion of alcohol contained in the oil. The test is based on the fact that anhydrous glycerine dissolves alcohol but not essential oils.

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* It can hardly fail to strike the reader with surprise that the fanciful and hypothetical doctrines of the iatro-chemists found so many votaries among those who were eminent for their attainments in so exact and *palpable* a science as anatomy. Van Helmont and Sylvius were no contemptible anatomists; while the "valve of *Vieussens*," the "circle of *Willis*," the "antrum of *Highmore*," and the "glands of *Bartholini*" attest to this day the distinguished anatomical attainments of other leaders among the "Chemikers." It does not seem to have been so in ancient times: Erasistratus, for example, the greatest anatomist of antiquity, uniformly expressed disapproval of all attempts to theorise on medical subjects.

† It is said that this physician preceded Hahnemann in the recommendation of the "soluble mercury" (which goes by the latter's name) in venereal diseases (Kurt Sprengel, op. cit. iv. 373). The value of Hahnemann's contributions to our knowledge of this subject is, however, fully recognised (op. cit. v. 591). In fact, Hahnemann does not claim to have been the first to prepare soluble mercury. His words are, "When I call it mine, I only mean thereby to say that I show a purer and more certain mode of preparing it than my predecessors," &c. (Preface to his "Instructions for Surgeons respecting Venereal Diseases.")

MAGNESIA AS AN ANTIDOTE TO ARSENIC.—MM. Clermont Frommel have addressed to a recent meeting of the adémie des Sciences a note bearing on this subject. ey find that when magnesia is mixed with sulphide of senic suspended in water, the sulphide is immediately ecolorised: part of the arsenic combines with the agnesia to form magnesium arseniate, the remainder rms a soluble sulpharseniate of magnesia. M. L. A. uehner has pointed out that the intestines of one person isoned with arsenious acid contained the trisulphide in e state of fine powder. Magnesia, therefore, is a perfect tidote to arsenic so long as the latter remains as arsenious id; but if, in cases of poisoning, it is generally converted to the sulphide, magnesia will do harm by making that bstance soluble. The question now waiting to be settled . What chemical changes does arsenic undergo when taken to the stomach?

MILK A SOLVENT OF QUININE.—Attention has recently een called to the fact, not generally known, that milk not ly acts as a solvent of quinine, but also to a certain xtent disguises its bitterness. It is stated that if one grain f the sulphate be dissolved in an ounce of milk, the bitterness f the salt is scarcely perceptible, while even two grains of e same quantity of solvent do no make it bitter to a marked egree. Five grains may be taken in two ounces of milk ithout rendering it particularly disagreeable, and if this e added to a tumblerful of milk, nearly all the bitterness isappears. The resident surgeon of the Birmingham eneral Dispensary recommends the use of a solution of uinine, in glycerine, in the proportion of one grain to one rachm, the dose being administered in a wine-glassful of ilk. The method would seem to present especial advanges in the administration of quinine to children.

SOFT SOAP ADULTERATIONS (Emile Picard).*—One undred parts of fatty matter, combined with soda or potash, ield 230 to 235 parts of pure soft soap, containing 33·14 per ent. of water. When certain adulterants are added, in uantities too small to affect the appearance of the soap, 00 parts of grease will yield 320 to 340 parts of what ould be a good commercial article, containing 33 to 38 per ent. of water. The same quantity of grease can be made o produce 380 parts of soap, containing as much as 52 per ent. of water. The adulterants generally used are clay, esin, fecula, and silicate of soda. All are added to increase he yield of soap, and the proportion of water it can conain. Clay is the most harmless of these adulterants. It is artly dissolved by the alkali, but makes the soap opaque, nd is easily detected by its insolubility in water. It ncreases the amount of water required to bring the oap to the proper consistence, but is not otherwise armful. It is less and less employed every day. Resin ombines with alkali, but the resulting compound "possesses none of the emollient qualities of fats." It etains large quantities of water, but alters the emollient nd detergent power of the soap, and makes it more caustic nd corrosive. Soaps adulterated with resin only are clear, rilliant, and transparent; more soluble in water than pure soap. They nearly always retain a slight odour of resin, which is most noticeable when the soap is warmed. Their colour is often redder than usual. They attack the skin, and make linen yellow. Fecula is very harmful, especially when combined with silicate of soda. It is generally employed with three or four times its weight of lye, water, or silicate of soda. Soap made with it contains an excess of alkali, and a very large quantity of water. It is more or less opaque, as the proportion of starch is large or small; it is easily soluble in water; it is much affected by changes of temperature; and its detergent power is much lessened by the large proportion of water it contains. The latter fault is partly concealed by making it excessively alkaline; it is then corrosive, and attacks and destroys the skin, colouring matters, and woollen and silken goods. Analysis reveals the presence of the decomposition products of the latter in the water in which they have been washed. Silicate of soda with fecula is far the most injurious adulterant of soap, and it is also the one most usually employed. Almost all commercial soaps contain it. Silicate of soda in small quantity does not alter the appearance of the soap; but it is decomposed when used, and silica is deposited in the fibre of the flax or cotton, and cannot be removed, rapidly destroying the tissues. Silk and wool are also attacked, and made more liable to be destroyed by alkalis. Water in which silk and wool have been washed with this soap contains considerable quantities of sulphur and ammonia resulting from the decomposition of the material. According to Dr. Vohl, linen and cotton cloths thus treated look, under the microscope, like worn fabrics—the fibres destroyed and the surface covered with a nap. Franklin said good bargains are sometimes ruinous. This is particularly true of soaps. Low-priced samples are never cheap; a larger quantity must be used to cleanse an equal amount, and fabrics are far more rapidly destroyed.

DIALYSED IRON has now arrived at the period of destructive criticism. Bouchardt, in his Annual, puts it among the least active preparations of iron, and in Philadelphia several have spoken against it as both "inactive and unclean." They say that it does not pass through the dialyser, and is therefore not likely to be absorbed; that as a colloid—not a crystalloid—its employment is theoretically wrong, and no doubt founded on a mistake, and the oxide it contains is at once precipitated by weak acids or alkalies, and that this is most likely its fate in the stomach, whence it passes into the intestines, and is removed in the fæces.

SOLUBILITY OF CERTAIN ORGANIC ACIDS IN ALCOHOL AND ETHER.—It is maintained that tartaric acid is insoluble in ether, whilst the organic acids most nearly approaching it are soluble in that liquid. E. Bourgoin having found that this exception does not exist, has compared the respective solubilities in alcohol and ether of the following acids:—Oxalic, succinic, tartaric, citric, gallic, benzoic, salicylic, and phthalic. His results are embodied in the following table:—

Acids	Ether	Absolute alcohol	Alcohol at 90 per cent.
Oxalic	1·266	23·730	14·700
Succinic	1·265	7·510	12·590
Tartaric	0·400	25 604	41·135
Citric	2 260	75·900	52·850
Gallic	2·560	38 790	23·310
Benzoic	31·350	46·680	41·620
Salicylic	50·470	49·630	42·090
Phthalic	0·684	10·080	11·700

INSECT POWDER.—Why the flowers of the composite plants *Pyrethrum carneum* and *P. roseum*, when pulverised to form the well-known "Persian Insect Powder," should prove so destructive to insects, while perfectly innocuous to other forms of animal life, has not hitherto been understood. Rother, who has investigated the chemical composition of *P. roseum*, ascribes its active powers to the presence of an acid, or, more properly, of a glycoside, which he terms Persicin. It is a brown non-crystallisable substance, having the odour of honey, and when boiled with hydrochloric acid is converted into sugar and Persiretin. With alkalis it forms a neutral amorphous salt, as well as an acid crystallisable one. Persiretin also behaves like an acid. The plant contains, in addition, an oily resin-like acid, Persiceïn. No alkaloid was found by Rother; Bellesone, however, obtained from the plant a crystallisable substance which exhibited exceedingly acid properties. Hager, who has examined the flowers of both *P. carneum* and *P. roseum*, attributes their insecticide effects to the presence of two substances, one of which, a body allied to trimethylamine, is combined with an acid in the flower. This powder, as well as the pollen, has a peculiarly powerful effect as an irritant. Hager finds that aqueous or alcoholic extracts of the powdered flowers contain little of these ingredients, and consequently to be of no value as insecticides.

CHEMISTS' BALL.—A preliminary meeting to make arrangements for the coming Chemists' Ball will be held at 17 Bloomsbury Square on November 4, at 9 P.M. Gentlemen wishing to become stewards, but unable to be present on that occasion, should write to Mr. Walter Hills, the honorary secretary, 338 Ofxord Street.

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* Extracted from the *Bulletin du Musée de l'Industrie.*

THE CHEMIST AND DRUGGIST

☞ *For particulars of Advertisements, Subscriptions, &c., please refer to the first page of Literary matter. An Index to the Advertisements contained in this issue will be found in the front portion of the Journal.*

OFFICE—Colonial Buildings, 44a Cannon Street, London.

RENDALL'S THEOBROMINE,
OR
CONCENTRATED COCOA,

BEING a first-class article, and nicely got up, commands a good sale by all Chemists who bring it under the notice of their customers.

In 1*s*., 2*s*., 3*s*. 9*d*., and 7*s*. 6*d*. tins, through the Wholesale Houses, or direct from the Proprietor,

J. M. RENDALL,
28 QUEEN STREET, EXETER.
Chief Wholesale Agents—
SANGER & SONS, 150 OXFORD STREET, W.

HAWKER'S JUJUBES. See page 5.

SEE SEABURY & JOHNSON'S Advertisement of INDIA RUBBER POROUS AND SPREAD PLASTERS on page 97.

SANITAS.

SANITAS.—The fluid is colourless, non-poisonous, and agreeable; it is harmless to furniture and linen, and is "THE ENEMY OF DISEASE." "SANITAS is a valuable Antiseptic and Disinfectant."—*Times*. "SANITAS is first favourite among Disinfectants."—*Lancet*.

SANITAS (FLUID) preserves food and prevents fever. In bottles (1st quality only) at 1s., 1s. 6d., and 2s. 6d.; in gallons at 20s. (1st quality), and 5s. (2nd quality).

SANITAS DISINFECTING POWDER.—In 1 lb. tin boxes at 1s., or in bulk.

TOILET SANITAS.—As a mouth-wash; for the bath; and for all the purposes of toilet vinegars. In elegant bottles at 2s. 6d.

TOILET SANITAS SOAP embodies the healthful principles of Sanitas. In boxes of three tablets at 1s. 6d.

SANITAS TOILET AND NURSERY POWDER, in 1s. boxes. Warranted free from all mineral matters and poisons.

CAUTION.—These articles may be had of all Chemists, Perfumers, and (wholesale) of the Company, 57 Moorgate Street, E.C.

PAMPHLETS AND PARTICULARS FREE ON APPLICATION.

METZ'S WILLOW BOXES. See page 41.

All Chemists are invited to apply for a Copy of our
Wholesale Price List of
HOMŒOPATHIC MEDICINES,
Mother Tinctures, Pilules, Globules, Sugar of Milk, Medicine Chests and Cases, Glass and Cardboard Goods, and all Sundries connected with the Homœopathic Business.

W. BUTCHER & CO., Wholesale and Expert Homœopathic Chemists, Spencer Place, Blackheath, London, S.E.

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PETER MUMFORD & SON'S PURE CRUSHED LINSEED.
BEST QUALITY. NO OIL EXTRACTED.
Ground so as to retain the natural colour of the seed without being heated.
22s. per cwt. Special Quotations for Larger Quantities.
REPORTS AND ANALYSES ON APPLICATION, POST FREE.
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REDUCTION IN PRICES.
GENERAL MINERAL WATERS DEPÔT
27 MARGARET STREET, REGENT STREET,
LONDON.

HOMŒOPATHIC MEDICINES.
E. GOULD & SON,
Chemists by Appointment to the London Homœopathic Hospital
Manufacturing Homœopathic Chemists,
Are desirous of appointing Agents for the Sale of their Preparations in various parts of the United Kingdom and the Colonies.
For Particulars apply at 59 Moorgate Street, E.C.

PURE COD LIVER OIL. See page 79.

THE ANALYTICAL SANITARY INSTITUTION,
Conducted by
ARTHUR HILL HASSALL, M.D., and OTTO HEHNER, F.C.S.,
54 Holborn Viaduct, E.C., London,
For the Analysis of Waters, Sewage, Air, Gases, Food, Drink, Drugs, Poisons, the Urine, Ores, Manures, Acids, Alkalies, and all Commercial Products.
Pupils received for instruction in Water and Food Analysis.
Laboratory Teaching for Medical Students to qualify as Medical Officers of Health and Food Analysts under the Adulteration Act.
A Vacancy for an Articled Pupil.

UNGUENTUM PETROLEI. See page 91.

IMPORTANT TO CHEMISTS,
SODA WATER MANUFACTURERS, AND OTHERS.
Removal of Lead from Water.
THE SILICATED CARBON FILTER
Entirely removes Lead from Water, thus meeting the complaints that arise from time to time as to the presence of Lead in Aërated Waters.
For confirmation of this assertion, see the opinions of such authorities as Dr. BARTLETT, Professor WANKLYN, and others, at page 74, December, 1876.

ELLIMAN'S EMBROCATION. See page 45.

EDITORIAL NOTES.

FOREIGN MEDICINES.

THE Board of Inland Revenue has lately taken steps to make known to persons interested that medicine stamps must be attached to "all foreign medicines, except drugs," sold in this country. The Board has discovered that many foreign specialties, chiefly of French origin, were being sold without being stamped, and within the past few weeks they have somewhat closely examined the stock of one of the firms by whom such medicines are imported (Messrs. Wilcox & Co., of Oxford Street, we believe, having been so honoured), the result being that a list has been compiled which enumerates certain medicines which (among others) are generally sold without stamps, but which are now declared liable to the duty.

We print that list on another page, but it is necessary to make it quite clear that it does not profess to be anything like a complete schedule of the foreign medicines liable. The following is an extract from the official letter:—"All the articles comprised in the list, *as well as all other foreign medicines, except those which can be shown to be drugs pure* *and simple, and which are sold as such*, are liable to duty, and the vendor incurs a penalty of 10*l.* by selling any of them unstamped, and a further penalty of 20*l.* if he does not hold a license for the sale of patent medicines."

Among the list of articles specified by name in the schedule to the Medicine Stamp Act occurs the line "Foreign medicines of all kinds except drugs;" then the tail of the schedule adds the well-known description of patent medicines which has so often been quoted. The same Act, however, declares that the following shall be exempt from duty:—"All medicinal drugs whatsoever which shall be uttered or vended entire without any mixture or composition with any other drug or ingredient whatsoever." It is obvious that there is room for some delicate argument respecting the distinction between drugs and medicines.

With a view of making our information more complete we were favoured a few days ago with an interview with the solicitor to the Board of Inland Revenue, who expressed his desire that the trade should be made acquainted with the views of the Board previous to their enforcement by law, which course of action will shortly be commenced. It will be noticed that the list printed includes such articles as the globules of M. Thevenot, which are simply pure medicines in their capsules or envelopes; the capsules of Mathey-Caylus, and other makers, containing pure balsam copaibæ, and other ingredients; the capsules of Dr. Clin, containing pure monobromide of camphor, and other similar preparations. These, we thought, should have come under the exemption. The Board, however, regards the envelope in which the drugs are enclosed as an "ingredient," and claims that the "drugs" thereby become medicines. We asked whether English-made capsules would equally come under the tax, but the solicitor declined to commit himself to an opinion respecting any article not actually on the table. The impression conveyed, however, was that Thevenot's and the rest were liable chiefly because they were "foreign medicines." We asked if Bravais' Dialysed Iron was liable, and were informed that that preparation had been carefully analysed in the laboratory at Somerset House, and found to be a perfectly pure solution of oxide of iron, and was, therefore, not subject to the tax. That is, it is regarded as a drug. Rigollot's Mustard Paper was next alluded to, and a sample we had with us was submitted to the chief of the Board, and returned with an authoritative decision that it would not be considered liable. No special reason for this decision was given with the answer, but we gathered from the remarks which went before that it was not to be considered as a medicine "to be used or applied" for the reason that it does not stick to the body. Hamilton's Linseed Leaves have been likewise exempted. Such preparations as the dosed granules of Garnier-Lamoureux, and other makers, are regarded as medicines because they contain the drug named *plus* sugar or other ingredient to form them into granules.

We have endeavoured to reproduce as faithfully as possible for the information of chemists the opinions and decisions of the Board of Inland Revenue; and we may add that it will be of no practical use for anyone to disagree with the Board's interpretation of the law unless such person be prepared to contest the question by legal action, for the Board is quite determined to vindicate its conclusions in a court of law.

THE MINERAL WATER TRADE.

The mineral-water manufacturers will assemble in force in London next week, on the occasion of the annual meeting of the National Protection Association of Mineral Water Manufacturers, to which all interested are invited.

On the morning of Tuesday, October 22, an exhibition of aërated water machinery, steam engines, bottles, corks, vans, and all the appliances connected with the business will be opened at the Agricultural Hall. This exhibition will remain open till Thursday afternoon, October 24. Judging from the exhibition held last year on a smaller scale, we have no hesitation in recommending all our readers either actually engaged in the mineral-water trade, or thinking of entering it, to visit the Agricultural Hall next week. They will see all sorts and sizes of machinery, and every new notion which the ingenuity of the many caterers to the trade has recently brought forth. If matters are not explained to them in fluent and persuasive strains, the said caterers will have strangely changed their skins and their tongues.

The meeting will be held at 1.30 on Tuesday, under the presidency of Mr. C. Mumby, and a dinner will take place in the evening at 5 P.M. Further information can be had from Mr. E. M. Adams, the secretary, at 113 New North Road.

AMENDING THE PHARMACY ACT.

Without any recorded dissentient vote, though not perhaps with any hearty relish for the work, the Pharmaceutical Council has formally appointed a committee to look into the Pharmacy Act with a view of seeing whether it is capable of improvement.

We have been accused of a persistent desire to depreciate the earnestness and sincerity of the Pharmaceutical Council, and it may be that the foregoing sentence may be considered to have that tendency. In this case, as we conceive, facts glaringly justify such depreciation.

Mr. Bottle proposed the appointment of the committee, and Mr. Atkins seconded him. The former councillor gave as one of his reasons for the motion his "very strong impression that if the Council did not take upon itself to look into the working of the Pharmacy Act very speedily, the country would elect a council which would."

Mr. Fairlie moved that the committee should have its report ready for the December meeting of the Council.

Mr. Bottle would rather the motion should drop through than pass it with such a rider; and Mr. Atkins said it seemed to him absurd that a committee could do such important work in two months. Ultimately only Messrs. Churchill, Fairlie, and Hampson could be found to vote for Mr. Fairlie's very reasonable suggestion.

This brief summary indicates, we maintain, only too clearly the half-hearted manner in which the work has been taken in hand by the Council. It is obvious that if anything is to be prepared for the next session of Parliament the report must be ready by December; and if the nine gentlemen who compose the committee, assisted by the society's solicitor, cannot overhaul the Pharmacy Act within two months, they cannot do it in twenty. The trade will adopt the words of the President himself with perhaps even more meaning than he intended, and will decline to be satisfied with a mere talking committee. We repeat our observation. The report to be of any use must be forthcoming in December at the latest, and we see no overwhelming reason why it should not be prepared for discussion at the November meeting of the Council.

There is every probability that next session a favourable opportunity will occur for the presentation of our reasonable claims to Parliament. We know that several influential members of Parliament are willing to support us, and it is considered by some of these very desirable that a Bill embodying the chemists' claims should coincide with the one which is sure to come forward next session to regulate medical practice. After the experience of the past year it is almost certain that the latter will be submitted to a select committee, and there will be no difficulty, if a pharmacy Bill is before the House, in getting that transferred to the same committee. For ourselves we should wish nothing better than that our demands should be thoroughly sifted in this manner. We ask for nothing more than that the intentions of the Legislature, as expressed in 1868, should be fairly carried out, and in several important respects, as, for example, in respect to patent medicines containing poisons, the present Act has proved quite powerless. The presence of one or two members at such a committee conversant with our position will be sufficient to ensure for us security for the future from those unjust attacks which the apothecaries and their allies have made upon us, and will assuredly repeat if they can establish their power.

THE WEIGHTS AND MEASURES ACT, 1878.

Now that this Act is passed the outcry against it is becoming very loud. It seems that a penalty of 10*s.* is enacted for each quotation publicly printed of goods at any but imperial measures. It appears likely that if THE CHEMIST AND DRUGGIST or any price list should mention the sale of "serons" of cochineal, "boxes" of camphor, or "bottles" of quicksilver, either would be liable to a penalty of 10*s.* for every copy distributed in Great Britain in which the quotation appeared. A newspaper with a circulation of 40,000 will be liable to a penalty of 20,000*l.* if it quote wool at so much per tod. The Act will come into force on New Year's Day, and it is stated that unless some English M.P. takes up the question a Scotch member, who is also an English merchant, will be prepared to move Parliament in the matter.

SANITARY TEST PAPERS.

A MR. J. B. WATSON wrote a few days ago to the *Times.* He said:—"As the fees of the analytical chemist are beyond the means of many, a few simple test papers might be prepared and used for many purposes. Certain cards should be prepared and hung in closets, which, by changing colour, would immediately betray the presence of sewage-gas in the atmosphere. Other papers might be prepared for testing the purity of water or tea, or other articles of daily consumption. The paper for testing water would immediately, should lead be present, betray its existence; the papers for testing tea would betray the presence of copper, and so forth. The papers might be prepared in packets and labelled. These test papers would be very inexpensive, and could be used by the most inexperienced with confidence."

We are prepared to offer a very large prize for a test paper which will immediately reveal the presence of a grain of lead in a gallon of drinking-water, or of one part of sulphuretted hydrogen or other sewage decomposition product in 10,000 of air. These quantities are quite sufficient to cause disease and even death, but we defy even the man in the moon to detect them by means of a test paper. The *Times* wants a chemical editor.

THE CHEMISTS' ASSISTANTS OF LONDON.

AIDED by some liberal donations from wholesale houses and under the vigorous management of a spirited committee, the Chemists' Assistants' Association have opened their second year's campaign with most promising prospects. Hitherto the meetings have been held at a public-house in Brewer Street, but now a very convenient, and for West-end assistants, easily accessible *locale* has been obtained at George Street, Hanover Square. We have had the pleasure of publishing several specimens of the quality of pabulum provided at the meetings of the Association, and the papers which we have printed have been of more than average merit. The programme for the current session (ending April 30) includes about a dozen "social evenings," and the following list of subjects:—"Salicine and some of its Derivatives," by Mr. Brown, F.C.S.; "Chemistry of Aloes," by Mr. Branson; "The Genus Quercus and its Pharmaceutical Interest," by Mr. Glover; "How Plants Feed," by Mr. Stuart; "The Gravimetric Processes of the Pharmacopœia," by Mr. Miller; "Notes on the N. O. Ranunculaceæ," by Mr. Wallis; "Hints on Plaster-spreading," by Mr. Sawden; "Pyrogenous Products," by Mr. Parker; "The Past and Present Condition of Chemists' Assistants," by Mr. McKnight; "Notes on Dispensing," by Mr. Bull; "Notes on New Remedies," by Mr. Squire; "Parasites," by Mr. Smart; "Emulsions, and their Preparation," by Mr. Cardwell; "Notes on Tobacco," by Mr. Glover; "Old and New Pharmacy," by Mr. Postans; "The Internal Arrangements of a Chemist's Shop," by Mr. Ager; "The Microscopical Discrimination of Starches," by Mr. Branson.

THE ELECTRIC LIGHT.

SHAREHOLDERS are not generally afraid of inventors. Of all men in the world the latter are supposed to be the least likely to interfere with business, either for good or evil. And, consequently, the repeated rumours of the advance of the electric light, and even the actual exhibition of its practicability which in France and England have attracted so much attention during the past few years, have exercised only a comparatively trifling effect on the value of gas shares. Sound authorities declared that even if gas should be superseded for lighting towns and large public buildings, the private consumption would always remain, and, though it was not publicly declared, there was a pretty well understood theory that the price charged to the private consumer could always be depended on to regulate the profits. But last Tuesday's *Times* contained an announcement that the redoubtable Edison, the hero of some two hundred practical patents, mostly connected with electricity, had turned his attention to its lighting capacities, and having scratched his head for a few minutes, had prepared a series of inventions, the effect of which would be, to use the simplest metaphor available, to knock gas into a cocked hat. The respect in which Mr. Edison's talents are held was strikingly evidenced during the next few days on the share markets of the country. The narrative which, with anyone else for its subject, would have only caused a momentary smile, excited a veritable panic among holders of gas shares, which have declined in varying proportions from 15 to 25 per cent. during the past week. What Edison says he can do is this. That by a most simple contrivance he can cut up and distribute an electric light into a thousand or ten thousand distinct lights. All previous experimenters have worked, he says, in one groove. He has discovered a totally new process, which he will make public in a few weeks, as soon as he has sufficiently protected his discovery. He will lay insulated wires down in the streets as gas-pipes are laid now, with branch wires for houses. The gas-fittings and chandeliers now in use will be utilised, but the present gas-meters can be returned to the companies, and carburetted hydrogen will become a chemical curiosity. This is nothing like all. Matches will not be required to light the apparatus; touching a little spring will be all that is necessary. The same wire will bring power and heat, so that you can run an elevator, a sewing machine, or any other echanical contrivance that requires a motor, and by means f the heat you may cook your food." Not unimportant, too, Mr. Edison's calculation that the light which now costs n America) from \$2½ to \$3, as obtained from gas, will be vailable per electric machinery for about 12 or 15 cents.

THE SEPARATION OF MEDICINE AND PHARMACY.

t has been a favourite theory with pharmaceutical and edical writers in recent years, if not through all ages, that he practice of medicine should be kept quite distinct from hat of pharmacy. That, at least, is the basis of the various ssays in which this ideal state of medico-pharmaceutic xistence has been pictured, but the filling up has generally ufficiently indicated a hopeless divergence of opinion etween the writers on the respective sides. Medical uthors have supposed the chief advantages to the public—he public interest being invariably the sole aim of the proected reform—to lie in the total abandonment by chemists f any approach to counter or any other sort of prescribing. Pharmaceutists, of course, look on the other side of the hield, and would rather discover the origin of evil in the ystem of practitioners dispensing their own medicines. Whether there is any chance of the accomplishment of this deal within the current cycle of æons, or whether the ublic would quite relish the benefit of the scheme if it ould be carried out in its fulness, it is not for us to say. Several gentlemen, who evidently hold strong views on the ubject, have issued a circular, according to which they proose to raise a fund from which to offer a prize of 100*l.* or 00*l.* "for the essay best calculated to show the advantages which would result to the public, the medical profession, nd to those who practise pharmacy, by the separation of harmacy from the practice of medicine in this country. The essay to include a brief but reliable description of the aws and regulations which are in force in other countries where this separation already exists."

They ask for the co-operation of those who agree with hem in desiring such a result as that which we have indiated. Their objects will be found more fully stated among ur advertisements.

Messrs. John Broad & Son, of Hornsey, Mr. R. Hampson, and Mr. T. P. Gostling, of Diss, subscribe the circular, and undertake the preliminary labour and expense in connection with this proposal. Mr. Hampson has, we believe, frequently expressed his belief that the public insists on a certain amount of medical advice from chemists. How does he econcile the theory with one to the effect that it would be advantageous to the same public to have all chance of counter advice taken from it?

PHARMACY IN LONDON.

WHEN Londoners want to learn something startling respectng their native heath, they cannot do better than turn to he "London letter" of a provincial newspaper. It is well known that the metropolitan correspondents of these ournals have the run of all the clubs, are on intimate terms with all the highest official dignitaries, have Cabinet secrets entrusted to them, and have telephonic wires laid on to heir offices from all the back stairs of Kensington and Belgravia. Their circle of acquaintance, however, is by no means confined to these narrow limits. Witness the followng neat bit of information which the London correspondent of the *Liverpool Mercury* has got hold of. It was not kind of him, though, to expose us like this, after we have been trying all these years to keep the facts secret. He says:—"I had very recently to make inquiries for possible openings for a lad of good parts, who is a victim of the prevailing depression. I tried everything, but it was useless. At last it was put to me delicately that the best of all businesses at the present moment is that of druggist. It requires only an ordinary education and three years' apprenticeship, very little capital, and only enough courtesy to secure clients. Even if people are poor they fall ill; poverty may be medicine, but it requires other admixtures to secure perfect health. I am assured that a successful chemist makes more than the doctor, and he must be a very poor stick indeed if he cannot gain an income. A London druggist in a good neighbourhood makes a rapid fortune. There are hundreds who are making over a thousand a year, and I had some named to me who were known to be making not one, but many thousands. A very successful chemist may reckon upon an income nearly that of a Lord Chancellor. The difficulty in the way, however, is pride. Young lads refuse to be "counter-jumpers." They would rather get two guineas a week in the City, sitting on a high stool before a desk, than earn a good income out of a shop. This tends to keep down the supply, and, of course, makes the career all the finer for the few who swallow their pride and their guineas together. If a lad wants money, and is not particular, he cannot be recommended to a more lucrative business than that of serving out drugs."

WHAT IS VIOLET POWDER?

A DISCUSSION on this question has been carried on with some vigour in the columns of the *Pharmaceutical Journal.* On September 14 letters appeared from Joseph Leay and John Rodger; the first stating that the old hair powder was liable to be *adulterated* with wheat flour; the second quoting a passage from Smiles' "Self Help," p. 84, ed. 1876, which states that in 1707 kaolin was contained in a hair powder then much used.

September 21 brought to light letters from Professor Redwood and "Rosicrucian." Professor Redwood stated that it had been clearly proved that two varieties of violet powder are commonly sold, one of which consists chiefly of starch, while the other consists principally of powdered selenite. Each of these varieties has its advocates. He suggested that the epithets "amylaceous" and "selenitic," or compounds of these, should be used to denote the real composition of different samples of violet powder. He thought that the direct observation of the old woman was better than the second-hand opinions of the doctor, and would allow the former to judge which powder was best.

"Rosicrucian" thought the discussion had fully answered the questions raised in his letter, and that the subject might be allowed to drop. The evidence is in favour of starch pure and simple. The evils caused by earthy matters may have been attributed to other causes. Free acid may be present in gypsum, and, as far as he could gather, the mineral seems to have been introduced only to enable wholesale dealers to sell a cheaper article. "The law is a terror to evil doers."*

Next week Mr. Baldock stated that he had been buying maize under the name of wheaten starch, which he thought explained the fact that his violet powder had sometimes caused irritation. Mr. Greenish ridiculed Professor Redwood's suggestion to denote the composition of violet powder by its name, and exhorted pharmacists to "hold to the pure starch, free from admixture, with its time-honoured name of 'violet powder.'"

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* We place this in inverted commas, for the author evidently thinks the sentence important. We have not yet discovered its connection with the context.

Professor Redwood replied that he did not believe pure starch, free from admixture, had received the time-honoured name of "violet powder," but that when hair powder went out of fashion it was modified, to adapt it for its increasing use in the nursery, and that with its changed composition its name was also changed. Starch made from wheat by the old fermentation process was the only kind then sold, and it therefore became the basis of the so-called violet powder. Starch is now made with caustic alkali, traces of which it often retains, and this, or the presence of essential oils in the powder, or some fermentive change in the starch, was much more likely to have caused the irritation mentioned by Mr. Baldock than the peculiar form of the maize starch-granules. Powdered selenite he knew to be useful in certain cases of moist, inflamed, or chafed skin. Hair oil has generally been made with olive oil, and pomade with animal fat, but the use of almond oil for the former and of the mineral vaseline for the latter would not be adulteration; and the same argument should apply to violet powder. The advocates for the use of starch pure and simple should also advocate the use of a pure and simple name, and not call the article "violet powder."

We will only remark that violet powder, at the beginning of the sixteenth century, which is the earliest form we have met with, was simply a kind of sachet powder or solid perfume. It contained no starch, but was a mixture of resinous and other aromatic ingredients. Pomade, as its name implies, was originally made from apples, and is quite as good an example of the changes of meaning of names as even violet powder itself.

WHAT IS SODA WATER?

For the last ten years, or ever since the public has taken an interest in the purity of its food, a controversy has been dragging out its slow length on the question "What is soda water?" It may be useful to put on record important facts and opinions which have been published on the subject. In The Chemist and Druggist for November, 1868, we printed figures, received from the principal makers of that date, which showed that the amount of bicarbonate of soda per bottle of soda water varied from $15\frac{1}{4}$ to 0 grains, and that the average was $3\frac{3}{5}$ grains. In November, 1877, the Selby magistrates dismissed a case in which a maker was summoned for selling soda water containing 7 grains to the pint, and another maker, whose soda water contained no soda, was fined 2*s.* 6*d.* and costs. At the trial Professor Attfield stated that there were three different articles vended as soda water: one with no soda; another with 2 to 8 grains, somewhat soapy, and sometimes objected to by the public; and a third, the medicinal article. What the public wanted was a mixture of aërated water with 2 or 3 grains sodium bicarbonate to a bottle.

Mr. Allen, of Sheffield, at the same time stated by implication that soda water should be of B. P. strength. In a case which was tried a few months ago at Huddersfield Mr. Jarmain, the public analyst, said he should call any aërated waters which contained from 1 to 75 grains of the bicarbonate, soda water, but he should fix the limits here. Could there be any better proof that there is no recognisable standard for the article. We have recently obtained the opinions on this subject of some of our most eminent manufacturers, and now publish them without names, but guaranteeing that what we print is a correct representation of the spirit of letters we have now before us. One firm says, "We make several strengths of soda water containing bicarbonate ranging from 6 to 20 grains per bottle (10 fluid ounces), but we send out no "soda water without soda."

Another says, "We are aware that it is the practice with some manufacturers to make and sell soda water without any soda at all—a system which we do not approve of. If there is a beverage demanded without the properties of soda water it ought to be supplied by a different name—simply aërated water but not soda water. In some cases the presence of soda in the soda water interferes with the taste, if the water should be mixed with fruit syrups, and which makes a carbonated water (without any other ingredient) far preferable to the palate. But this should then be sold as such, so that there ought always to be a distinction made between soda water (containing soda) and carbonated water (containing no soda). Our soda water contains 15 grains of soda (equal to about 9 grain $NaHCO_3$) a bottle.

Another says:—"Soda water we believe to be aërated water with a larger or smaller proportion of bicarbonate of soda to the bottle. But we have no hesitation in saying that soda water of the strength required by the British Pharmacopœia would not be acceptable to the consumer. In fact, we will go farther, and say that the indiscriminate use of such soda water, particularly in an alkaline condition of the system, might produce serious results. Although we do not object to make soda water full strength when required for medicinal purposes, under the directions of a medical man, still we would consider it injudicious to supply an article of such strength for ordinary or habitual use. Indeed, after careful observation and a very long experience, we consider a few grains of pure bicarbonate of soda to the bottle more desirable."

Theoretically and ideally we must speak strongly in favour of the course we recommended just ten years ago. Aërated-water manufacturers generally ought not only to recognise the difference between carbonated water and soda water, but they should take steps to make the public recognise it. The fact that the public do now mistake the terms is no reason for leaving them in the darkness. Indeed, it seems to us that a large firm might easily start as a profitable speciality, "Blank's pure carbonated water, guaranteed to contain no alkalies, but to be prepared from pure water and carbonic acid." Without going beyond the strictest limits of truthfulness, quite enought might be said to make the public alive to the advantages carbonated water can claim over soda water. The use of words with indefinite meanings attached to them has ever caused, and is still causing more misery, confusion and heart-burning than any other single thing, and we shall be heartily glad to see the name soda water restricted to an aërated beverage containing an appreciable quantity of soda.

REVIEWS
AND
Literary Notes.

Dental Materia Medica and Therapeutics, with Pharmacopœia. By James Stocken.

This is a handsome little book, an edition of which was exhausted in less than four months. It was originally drawn up at the desire of the officers of the National Dental Hospital. The printing, binding, and appearance of the book are excellent. The first 70 pages are filled with an account of therapeutics and general pharmacology. Then follow special pharmacology, a table of poison symptoms and antidotes, and the Dental Pharmacopœia. This contains a selection of formulæ from a large number of sources, some of them being original. There are two indexes, one of Materia Medica, giving, in addition, the dose of each drug, d another of the medicines mentioned in the Pharma- pœia. There is a list of the abbreviated terms met with prescriptions, a table of doses, of the number of drops uivalent to a drachm of water, of the pulsation and respira- on per minute at various ages, of weights and measures, proximate measurement, and elementary bodies and emical notation. It is a very handy little work.

he Organic Constituents of Plants and Vegetable Substances, and their Chemical Analysis. By Dr. G. C. Wittstein. Translated and enlarged by Baron Ferd. von Mueller. Melbourne. 1878.

HIS is essentially a work of reference. It appeals to a mited circle, but in such a way that none in that circle n refuse to admit its claims. The original work was pub- shed in German in 1868. Official labour has delayed the sue of this translation, which was commenced many years go. The delay has allowed many of the discoveries of the tervening years to be incorporated with the work. This, wever, has not been done so completely as could be ished: indeed, some of the omissions and statements are rprising. The work is in two parts. Part I. is in three visions. The first of these is an alphabetical enumeration the proximate constituents of plants and vegetable sub- ances "as far as hitherto known," their properties, mode preparation, and quantitative estimation. This occupies ore than two-thirds of the book. It may be considered as digest of the chemistry of vegetable substances, which cludes the elaborate researches on decomposition and bstitution products. It is a pity that students are not ferred from the concise account given to the original urces from which the information is drawn. This would ve increased the size of the book, but it would have en- anced its value to those who may wish to fill up the gaps our knowledge which it is in part intended to reveal. ext comes a table of the formulæ of vegetable compounds; en an alphabetic table of plants whose products are escribed in the previous pages. This serves as a systematic ecific index, directing the student to all the substances btained from a given species. Then follows a systematic able of plants arranged on De Candolle's system. This serves s an ordinal index: from it we can learn what are the plants elonging, say to *oleaceæ*, whose products are here men- oned.

Part II. gives detailed directions for the analysis of egetable products. The comparative value of this work will ndoubtedly be greater in Australia than in this country. he length of time it takes European journals to reach the outhern continent makes it impossible for a writer to be up to the times," as the phrase is understood here; and he journey a book must take before it comes into the nglish reviewer's hands will make this still more apparent. eachers, professors, and original workers will find this an dmirable standard handbook, to be supplemented by the les of scientific journals from 1877 forwards.

THE Philadelphia *Hahnemannian Monthly* appeared for the ast time in July. It is withdrawn from publication until here seems a chance of producing it as a pecuniary success.

WE have received part 6 of the new edition of Cooley's "Cyclopœdia." It contains 112 pages, and the articles from isinfectant to Enpyrion. In the last edition the articles etween these two points were contained in 70 pages.

"HUNTER'S MECHANICAL DENTISTRY." (Crosby, Lock- wood & Co., London).—This is a timely publication, treating horoughly and practically of the construction of the arious kinds of artificial dentures. The subjects are treated ystematically in nineteen chapters, and the work is well llustrated. The author's style is clear, and he has evidently a workmanlike acquaintance with the tools he describes. The work is sure to be useful to dental students and prac- itioners.

A VERY few words will dispose of a book which has been sent to us, entitled "Consumption: its Cure," by Edwin W. Alabone, M.D., M.R.C.S., of Mildmay Road, N. The author fills up most of his pages with a description of the disease and its symptoms. Then he announces that he has perfected a preparation which is a composition of oleine and phosphorus, and is sold by a certain chemist in the Green Lanes. He winds up with the record of fifty wonderful cases of cure by this marvellous compound. The volume containing this extraordinary information is smaller and not nearly so cleverly written as Dr. Rooke's "Anti-Lancet," but instead of being offered for free distribution, as we might fairly have expected, it is sold at the modest price of 5*s.* We notice that the author in piling up his qualifications on the title-page, describes himself as "Honorary Member of the British Pharmaceutical Association." He will, perhaps, be surprised to learn that there is no such association in existence, and that he is not an "honorary member" of any society of a similar name.

WE have received the 13th edition of Messrs. Corbyn, Stacey & Co.'s "Notes on Drugs, Chemicals, and Pharmaceutical Preparations." The pamphlet is a most useful one for chemists or medical men to have in their possession, and as it is offered free by the firm by whom it is compiled and published, there is no excuse for any person interested to be without it. The notes are very brief, but indicate generally the properties and mode of administration of such new remedies as albuminate of iron, apiol, chaulmoogra oil, fucus vesiculosus, ozokerine, &c., and in many cases references are given to sources of information.

WE have to acknowledge from the Homœopathic Publishing Company copies of new editions of works of homœopathic tendencies. The first is "The Lady's Manual of Homœopathic Treatment," by the late Dr. E. H. Ruddock, which has reached its 7th edition and its 36th thousand. Few men had the art of presenting medical information to general readers in such a useful form as Dr. Ruddock, and his books have replaced in many families the old Buchan and others. Even doctors of the old school would, perhaps, consider homœopathy to be the system best adapted for amateur treatment, and Dr. Ruddock's advice in respect to hygiene is of the soundest and most comprehensive character. Apart from its homœopathy, which we do not here criticise, this lady's manual is a treatise of considerable service.

"THE POCKET MANUAL OF HOMŒOPATHIC VETERINARY MEDICINE" (3rd edition, 15th thousand) is a neat compilation, also by Dr. Ruddock, giving briefly the causes, symptoms, treatment, medical and accessory, of the diseases to which animals are more commonly subject. This edition has had the advantage of Dr. George Lade's supervision, and the work is useful to those who wish to have an idea of homœopathic veterinary treatment, but to those who would wish to go into it more thoroughly we would recommend Messrs. Lord & Rush's "Veterinary Vade Mecum."

"THE HAIR IN HEALTH AND DISEASE," by E. Wyndham Cottle, M.A., F.R.C.S. (London, Churchill), is by no means an exhaustive treatise on the subject which it undertakes, but it contains some notes which will usefully contribute towards such a work. The author states that the notes are partly those of the late Mr. George Nayler, F.R.C.S. Mr. Nayler was surgeon, and Mr. Cottle is senior assistant-surgeon, to the Blackfriars Skin Hospital.

A brief description of the anatomy and physiology of the hair is followed by one on alopecia or loss of hair, which subject is treated more fully than any other in the book. Canities, or bleaching of the hair, is the title of the next chapter, but except that it records one very curious case, not perhaps generally known, it is not important. We are told on the authority of Surgeon D. P. Parry, an eye-witness of the event, that during the Indian Mutiny, a Sepoy of about 24 years of age, who was taken prisoner, was stripped quite naked and surrounded by soldiers, in which condition he was questioned. Intense terror seized him, and in the space of half-an-hour (!) his hair turned from a glossy jet black to a uniform grey. A chapter on hirsuties, or excess of hair, is merely a collection of a few instances without any suggestion of treatment. Ringworm, favus, sycosis, and pediculi are then discussed in a businesslike manner, and the best remedies are described. A final chapter on hair-dyes gives a few formulæ for black, brown, and light shades, and the author has the sense not to excite himself over either the criminality or the danger of these. In respect to the latter he declares that though sometimes the hair actually treated may be rendered brittle, he has not known a single instance of injurious effect on the health, nor does he see any probability that such should occur, unless there should be severe abrasion of the cuticle.

LEGAL & MAGISTERIAL.

THE POISON-BOOK.

CAN A CHEMIST BE COMPELLED TO SHOW HIS POISON-REGISTER?

On September 17, at the Spalding Petty Sessions, Messrs. Shadford & Co., chemists, of Spalding, were summoned for that, on or about the 28th August, they did, by their apprentice, sell a certain poison called strychnine without causing the same to be properly entered in a book, viz., by omitting to insert in the register the date on which the poison was purchased.

Mr. Calthrop defended.

Inspector Taylor was informed on August 28 that a valuable dog had been poisoned. He went round to the various chemists, and was shown the register by Mr. George Shadford.

Mr. Calthrop here objected to the inspector being allowed to state the contents of a written document without that document being produced. The Act was silent on that point, and he believed there was no power to compel the production of the register.

Canon Moore wished to know why the register was not produced? There could be no reasonable objection to the Court arriving at the facts of the case. It was unreasonable to suppose that the Legislature would order such a register to be kept, and then allow it to be kept secret from a court.

Mr. Calthrop replied that where a summons was taken out on the commission of such a purely technical error as in this case, there ought surely to be no complaint if he attempted to meet it by objections of a technical nature.

The Clerk advised that if a Crown Office subpœna were procured, the defendants would be compelled to produce the book.

Mr. Calthrop said he had carefully considered the Act, and he was strongly of opinion that the defendants could not be compelled so to do, and he should advise Messrs. Shadford to that effect.

After some little argument between counsel and the Bench—in the course of which Mr. Calthrop urged that the complaint arose from a simple oversight on the part of an apprentice, who had properly inserted the sale in the register with the exception of denoting the date—the case was adjourned till October 1.

On that date the Clerk to the Magistrates said he had thought the proper course of procedure in the matter would be to serve the defendants with a notice, a copy of which was produced, demanding a correct copy of the entry in the register on payment of a certain prescribed sum. The inspector had accordingly served Messrs. Shadford with such a notice, and offered them the sum of sixpence for a copy of the entry referred to, but they had declined to allow him to take any extract. The Clerk had acted in accordance with the Act 14 and 15 Victoria, c. 99, s. 14, which runs thus:—"Whenever any book or other document is of such a public nature as to be admissible in evidence on its mere production from the proper custody, and no statute exists which renders its contents provable by a copy, any copy thereof or extract therefrom shall be admissible in evidence in any court of justice, or before any person now or hereafter having by law or consent of parties authority to hear, receive, and examine evidence. Provided it be proved to be an examined copy or extract, or provided it purports to be signed and certified as a true copy or extract by the officer in whose custody the original is entrusted; and which officer is hereby required to furnish such certified copy or extract to any person applying at a reasonable time for the same upon payment of a reasonable sum for the same, not exceeding fourpence for every folio of ninety words."

Mr. Calthrop said he had three objections to raise to any proceeding under that section. In the first place, the document was not a book of a "public nature" at all, but a private book, used by the defendants in carrying on a private business; secondly, Messrs. Shadford were not public officers; and, thirdly, this was a case in which the defendants were punishable on summary conviction, and, that being so, the Bench could not compel them to furnish any evidence which would be likely to criminate themselves.

The Chairman said they would take the first of Mr. Calthrop's objections, and deal with it before entering upon the others. The question was what constituted a public document. The register of the sale of poisons was one which Messrs. Shadford were required by Act of Parliament to keep, and, that being so, it was to all intents and purposes a public document.

Mr. Calthrop replied that on that point he was certainly at issue with the Chairman. The book was one which the Act required to be kept in the carrying on of a private business, and in which the sale of all poisons must be entered. But there was nothing in the Act to debar Mr. Shadford from destroying it immediately after making the entry. It was simply ordered that the entry was to be made, and nothing was said requiring the book to be preserved afterwards.

Canon Moore: But common sense told them the Act intended that.

Mr. Calthrop replied that they were not there to supply common sense to Acts of Parliament. A great number of the Acts lacked in that particular, and sadly needed amendment: and this was one of them. He strongly contended that this book was not a public document within the meaning of the Act, because he took it that such a document must be one to which the public had a right of access, or which was constituted a public document by express Act of Parliament. If that definition were correct, then Messrs. Shadford's book certainly did not come within that category.

The Chairman intimated that a public document might be one that was kept for the protection or benefit of the public.

Mr. Calthrop admitted that that was so, but in such a case it must be expressly specified in the Act. He took it that the object of the Act in requiring the book to be kept was to provide evidence against persons who purchased poisons for improper purposes, and in order that the chemist who kept it might be able to refresh his memory and give evidence in court respecting the sale. That was the clear intention of the Act, and not that he might be compelled to produce it as evidence against himself. If that were not the meaning, the Act would undoubtedly have gone on to say that the chemist should be bound to produce the register when called upon to do so; but nothing of the kind was said, and nothing to lead to the inference that he could be compelled to produce it.

Mr. Everard thought that Mr. Calthrop's view of the matter would nullify the Act of Parliament in most cases, but that gentleman denied the inference.

Canon Moore said they had simply to determine whether this was or was not a public document; let them take the opinion of the Court on that, and then proceed to the next point.

The Clerk, in reply to a question from the Bench, said he believed the poison-book was a public document within the meaning of the Act, and

The Court accordingly over-ruled Mr. Calthrop's objection.

Mr. Calthrop then contended that Mr. Shadford was not an officer in charge of a public document, and therefore could not be compelled to produce it. He was a registered chemist, but that did not convert him into a public officer. A coroner was compelled by Act of Parliament to take down in writing the evidence of a witness at an inquest, and to have affixed to it the signature of the witness and his own signature, but no Act of Parliament in the world could compel him to produce those depositions in a court of law. And just so was it with the defendants and their book; they were compelled to make these entries, but not compelled to produce the document on request.

Canon Moore said the two cases were not parallel. A chemist, although not in reality a public officer, was such a person as the Act contemplated to have charge of the document, and as such he became a public officer within the eaning of the Act. The law required a chemist to be regisred before he became duly qualified to practise as such; nd the very fact of his having to be so registered made him public officer.

Mr. Calthrop said a public officer must be a man who perorms some public duty. What public duty does a chemist erform? or what public duty does a doctor perform? he registration of their names was a simple qualifiation required to enable them to carry on a private usiness.

The Chairman replied, the fact that they were comelled by law to enter poisons sold rendered them public fficers.

Mr. Calthrop said a clergyman was bound by law to egister marriages and deaths, but did that make him a ublic officer?

The Chairman: Yes, for that particular purpose.

Mr. Calthorp submitted that the registration of a chemist was for the purpose of enabling him to carry on a private business under certain restrictions and regulations: that did not make him a public officer.

Canon Moore said the fact of his being registered gave the chemist certain opportunities and privileges from which other people were debarred.

Mr. Calthrop: But it was not an appointment, and therefore he could not be called a public officer. If a chemist were appointed to hold an office under Government, then that would be another matter, and he could not contest the point; but he was not.

Canon Moore: The register registered his appointment as a chemist, and that, in his opinion, made him a public officer.

Mr. Calthrop replied that it might just as well be argued that a man who went out shooting was a public officer, because he had to have a license before he could use a gun.

After some further discussion the Bench ruled that a chemist was a public officer within the meaning of the Act.

Mr. Calthrop said he must then fall back on the third section of the Act, in which it was expressly stated that nothing therein contained should render any person who in any criminal proceedings was charged with the commission of an offence punishable on summary conviction competent or compellable to give evidence against himself. The learned gentleman contended that to compel Messrs. Shadford to produce the book would be to force them to give evidence against themselves, which they could not do.

The Clerk thought the defendants could be compelled to produce the register; and, proof of the service of the notice to produce on them having been given, Mr. Calthrop still advised his clients not to produce it.

The Chairman said that, inasmuch as the book was not produced, they must proceed to take secondary evidence as to its contents.

Inspector Taylor said that on August 28 he received information of a valuable dog having been poisoned, and he went to the chemists in the town, amongst them being Mr. Shadford, in the Market Place. He told him his business, and asked him to show the book in which he registered the sale of his poisons. It was shown to him, and he there saw——

Mr. Calthrop objected to secondary evidence being given of a document which was not shown to exist. Before secondary evidence could be given upon it, it must be proved to exist and to be in the custody of the other side.

The Bench determined to proceed with the evidence.

Witness continued: Mr. George Shadford produced the book, and he saw in the margin, in the left-hand corner——

Mr. Calthrop again urged the objection that no secondary evidence could be given upon the notice served on the defendants unless the book were proved to be in existence at the date of the service of the notice. The objection was again over-ruled, though only after considerable argument. —Witness continued: He had not seen the book since August 28: he saw a book when he served the notice on September 7, but he would not say it was the register in question—he believed it was the same book.—A lengthy discussion then took place as to what constituted proof of the existence of the book on September 7. The Bench considered the evidence of the Inspector that he believed he saw it on that date was sufficient for their purpose, but Mr. Calthrop strongly contested that opinion.—Witness continued: He saw the book on August 28, and he believed the same book was in the custody of Mr. Shadford at the time he served the notice. He knew nothing of the book at the present moment.—At this stage, and after a long conversation arising out of Mr. Calthrop's continued objections, the learned gentleman submitted that if the officer was competent to give evidence as to the existence of the book on September 7, it was competent for him to cross-examine him on that point before he gave evidence as to the contents of the document.—The Clerk disputing this contention, Mr. Calthrop retorted energetically that he was surprised at the learned clerk's ignorance. The witness was then allowed to describe the book so far as he saw it on September 7, but in cross-examination he said he could not tell whether Messrs. Shadford started a new register immediately after August 28, or whether that he saw on September 7 was the old or a new register.—Mr. Calthrop inquired upon that whether the justices were satisfied that the book the inspector saw on August 28, was also seen by him on September 7.—The Chairman replied that they were.—Examination continued: On August 28 he saw an entry in the book, and in the outside column he saw no date of entry. He saw the entry signed "R. Gibson," and that the poison sold was for the purposes of killing mice. He could not say whether it was described as "Battle's Vermin-killer," or "Shadford's." He was satisfied that all the rest of the columns were properly filled up with the exception of the date column. He drew Mr. G. Shadford's attention to the omission, and in reply that gentleman said he did not think he was bound to enter it—meaning, he understood, the date. Mr. Shadford then called his apprentice, Branson, and asked him if he had entered that particular sale, and he replied that he had. Witness asked the boy if he knew who "R. Gibson" was, and he replied that he did not. He saw Mr. George Shadford about to enter the date whilst he was present. The previous entry was dated August 27. Witness was looking for a particular date, viz., the 26th.—By Mr. Calthrop: He had received information that a dog had been poisoned, but he had heard since that the dog died from natural causes. The prior entry to the one in question was August 27. He was not aware that in book-keeping one date was made to serve for the whole of the transactions of a particular day. In this case there were neither dots nor figures to apply the sale to the 27th. He believed, but he would not swear, that the boy said the poison was sold on that particular day, the 28th.

John William Branson, apprentice to the defendants, was next called, upon which Mr. Calthrop handed up to the Bench the witness's apprenticeship indenture, by which he bound himself not to divulge the secrets of his master.—The Bench decided, however, to hear his evidence. He was examined by the Inspector, and stated that he did not on August 28 but he did on or about that date, sell to a person a twopenny packet of "Vermin-killer." An entry was made in the poison register, and the person signed his or her name. He could not say whether the packet contained poison. He did not know who made it. He did not enter a date by the side of the entry, but there was a date above it referring to the same day. When questioned by Mr. George Shadford, he said there was a date above it referring to the same day, and it being Tuesday and he being busy, he did not think it necessary to again enter the date. He would swear that he did not know whether the packet contained poison, and also that he did not help to make it. The "R. Gibson" entered was a woman. She asked for a twopenny packet of mice poison, and he gave her that which he supposed would kill mice. She then signed her name.—Cross-examined: The date "27th" would apply to the whole of the transactions of that particular day. On referring to the register he should be well able to say on what date the vermin-killer was supplied to Mrs. Gibson. On August 27 he did not sell any "Battle's Vermin-killer" to Mrs. Gibson: he sold her a packet of "Shadford's "Vermin-killer." He did not mix or prepare it himself, as he did not know what the contents of the vermin-killer were. He had read the schedule of the Act of Parliament, but he could not say whether any of the ingredients there described as poisonous were used in making up "Shadford's Vermin-killer."—By the Chairman: He entered the poisons as "a 2*d*. packet of vermin-killer." The register was not full of entries: it was about three-parts full.

This concluding the evidence,

Mr. Calthrop submitted that he had no case to answer. Whether the composition sold was Battle's or Shadford's Vermin-killer, there was no evidence to show that it contained any poison whatever. They were charged with selling a preparation containing strychnine, and, therefore, it was for the prosecution to prove that it did contain strychnine: that they had utterly failed to do.

The Bench having retired and consulted for some time on the point,

The Chairman said they had carefully considered the matter, and they had arrived at the decision to dismiss the case.

Mr. Calthrop applied for costs, which the Bench declined to allow.

MR. JOHN KNIGHT, chemist, 56 Chapel Street, Somerstown, was summoned to the Clerkenwell Police Court on October 8 by Inspector Redstone, on a charge of having on September 19 sold some prussic acid without having previously entered the name of the purchaser, the quantity, and the object for which it was sold in a book, as required by Act of Parliament. Another summons charged him with selling the poison without having labelled the bottle with the name of the poison and also with the word "Poison."

Mr. Ricketts, solicitor, defended.

Police-constable 300 Y said that on the day in question he was called to 43 Ossulston Street, where he found a person lying dead. He was told that the deceased had taken prussic acid. On the mantel-shelf he found a bottle, which was not labelled. In reply to his question the defendant acknowledged that the bottle witness produced was one in which he had sold 4*d.* worth of prussic acid, and that he had neglected to label it as required. This was the case on the second summons, which was taken first.

Mr. Ricketts argued that there was really no case against the defendant, as the date of the sale had not been proved, while the Act required that it should have been sold within six months.

Mr. Barstow said he should assume that the sale was within six months.

Mr. Ricketts said he hoped the learned magistrate would not assume anything, but on the other hand require strict proof of the date of sale.

Mr. Barstow said he should assume that the sale took place within a reasonable time of the occurrence. The defendant would be fined 5*l.* and 2*s.* costs; in default of payment, or distress, one month's imprisonment.

Mr. Ricketts asked that a case might be granted, as the matter was of the greatest importance to the trade, and it was defended on principle.

Mr. Barstow said he would, and would take notice the objection was made by Mr. Ricketts.

The first case was then taken.

Mr. Ricketts said to save time he would at once submit that the defendant could not be convicted twice for the same offence. Mr. Justice Lush, in the case of Berry *v.* Henderson (L. R., 52 B, 296 : 34 J. P. 805), decided that to be so, and that was an exactly similar case.

Mr. Barstow thought that justice would be met by the defendant paying the cost of the summons.

Mr. Ricketts objected, quoting the words of Mr. Justice Lush, "No matter how far the offender deviates from the statute, the statute only renders him liable to one penalty for each act."

Mr. Barstow thereupon dismissed the summons.

BANKRUPTCIES AND LIQUIDATIONS.

WILLIAM BEATSON, Rotherham.

THE case of Mycock *v.* Beatson was heard before the High Court of Justice, Chancery Division, during September. On the 18th ult. Mr. Beaumont applied for an order to compel the trustee in bankruptcy of the defendant Beatson to hand over to the plaintiff, as receiver in the action, certain partnership books which were in his possession.

Mr. Millar opposed the application on the ground that the evidence was complicated, that there was no immediate pressure in the case, and that the books in question—which were not partnership books at all, but private books of the defendant—were safe in the custody of an officer of the Court of Bankruptcy.

Mr. Beaumont said the circumstances of the partnership were critical, and the possession of these books was of vital importance to the plaintiff, who, he should be able to show, had been grossly defrauded. They were nothing but partnership books, and only private in the sense that they related to the conduct of the business before the plaintiff became a partner. After the partnership was entered into Mr. Beatson was the salaried manager of the business, and the partnership transactions were entered in the books which the trustee in bankruptcy was now, in defiance of an order of the Master of the Rolls, endeavouring to keep back.

After some further discussion Mr. Justice Hawkins referred the matter to Chambers for the chief clerk to report whether these books are or are not books of the partnership.

On the 20th ult. Mr. W. Binns Smith (chief clerk) gave it as his opinion that the cash-books which began in 1875 belonged to the partnership of 1878, and must be produced. As regards the letter-book commencing in 1866, he reserved his decision.

R. R. KELLY, Chemical Manufacturer, 29 Mark Lane, E.C.

THIS failure has been already reported in THE CHEMIST AND DRUGGIST. The meeting of creditors has since been held and liquidation by arrangement resolved upon, with Mr. W. F. Jack, accountant, 16 Mark Lane, as trustee, and a committee of inspection, the debtor's discharge being also granted. The liabilities were returned at 30,611*l.* 10*s.* 9*d.*, and assets 1,201*l.* 17*s.* 6*d.* The resolutions have been duly registered, and on the case being brought before the Court on September 21, Mr. Registrar Pepys authorised the trustee to disclaim his interest in certain property that was of no value to the estate.

F. W. STEEL, Chemist, 41 Bishopsgate Street Within, E.C.

THIS case was noticed in our last issue. The statutory meeting has since been held, and an application was made to the Court on September 17 for the registration of the resolutions come to by the creditors. The debts were returned at 1,903*l.*, and assets 195*l.* It was resolved that the estate should be liquidated by arrangement, Mr. W. C. Herring, 40 Aldersgate Street, being appointed trustee, to act with a committee of inspection. Mr. Registrar Pepys ordered the resolutions to be registered.

Correspondence

THE CHEMISTS' ASSISTANTS' ASSOCIATION.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

DEAR SIR,—Having recently come to London as a quiet little mouse, I felt, after settling down in my new crib, that I should like to look around and see if anything was done in an especial manner for chemists' assistants, so that I could find a friend in this great metropolis, and where, moreover, some inducements would be offered to the young and uninitiated to further his knowledge by becoming associated with those more favoured than himself. To my great delight I suddenly dropped upon a calendar issued by the Chemists' Assistants' Association (which I was told could be procured from either of the Honorary Secretaries, Mr. Cardwell and Mr. Stuart), and on reading it over my heart was cheered, and I felt that assistants were thus honoured, so I resolved to go to 32A George Street on a tour f inspection. Happening to start from the west I wended ny way down Bond Street and Brook Street, into Hanover quare, and then turning a little to the right, I suddenly ame upon the beautiful and fashionable church so well nown to country mice in connection with marriages of the ig "lions," namely, "St. George's"; and this almost took ay breath away, having already brought me to a standstill. ecovering my equilibrium after this surprise, I kept straight n until, arriving at 32A George Street, I pulled up, and was nformed by some gentleman within that the London hemists' Assistants' Association would meet permanently here. Receiving a cordial invitation to walk in, I entered or the first time, and soon found myself at home; and this, ith what I heard and saw and the kindness I received, nduced me at once to join the ranks and become a member.

In conclusion, sir, I would ask your kind indulgence for he publication of this letter, because I have found good—nuch good—myself in this association, and I am sure, in rder to increase its usefulness and widen its power, the best hing that can be done is to make it known to others, so that hey, too, may be guided to this useful society, and partake f and share in the blessings which are duly appreciated by

Yours very respectfully,
A MOUSE FROM THE COUNTRY.

TRADE DEFENCE.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

SIR,—I have been carefully scanning the columns of your journal for some time, in the hope of seeing some such suggestion as I am about to make. As no abler hand has taken the matter up, I venture to lay my suggestion before the chemists and druggists throughout the country that they may consider the matter seriously, and, I trust, put such pressure upon the members of their Council, as will bring them to realise the real wants and necessities of the trade. As a member of the Pharmaceutical Society, I have always felt that it would be a pity, and somewhat anomalous, if the Council, through its law agents, were to be drawn into Court in defence of any case of prosecution by the Apothecaries' Society. The two bodies are so identical in their operations as examining and licensing bodies, that I think nothing should have been done on either side to bring them into open antagonism. Circumstances change, however, and so do our opinions. I have to confess that my opinions on the above point have changed, and I am very glad to say that this has not been produced by any direct action on the part of the Pharmaceutical Council. I think the Court of Apothecaries have had no cause for complaint of the conduct of our Council. It becomes a serious matter, however, for the trade in general, and for very grave consideration on the part of our representation at Bloomsbury Square, when we find that the Court of Apothecaries are giving their influence toward the prosecution of chemists and druggists for legitimately advising their customers over their counters, just as one friend would advise another, but are also subscribing liberally of their funds to assist such unjust and unnecessary prosecutions. When we hear of bodies as the British Medical Association subscribing for such a purpose it behoves us to look at the matter fairly and see what we can do. I think the trade cannot be too grateful to the gentlemen who took upon themselves the formation of the Trade Defence Association, and also to yourself, Mr. Editor, for having enabled that association to be launched without any unjust or harsh criticism. I therefore trust the appeal made by the Executive of that body to raise a guarantee fund of 2,000*l.* shall not be in vain, and that those who appreciate the noble stand taken in the interest of the trade will subscribe liberally towards it. In connection with this matter (and this is the point I wish specially to refer to), the question arises—Is the Pharmaceutical Council not bound to do something directly for the trade in the matter? I think the correspondence you published some time ago between Mr. Flux and Mr. Upton, taken in connection with previous and still more recent action, to be most unsatisfactory; and there seems nothing left for the Council but to buckle on its armour, and do its very utmost to defend the trade. The Trade Association is prepared to do the necessary work, and the least the Council can do is to vote a sum of money in aid of that Asssociation Guarantee Fund. I think 500*l.* not too much, and therefore hope that Mr. Fairlie or some other member will bring the matter up at the Council Board again now when danger threatens, and let us be united in resisting such aggressive claims as are put forward on the strength of an Act of Parliament, which for two generations has been a dead letter. Let there be no half-hearted action, and we shall then learn who are the *real* representatives of our trade

Yours, &c.,
SIEGEL.

CHLOROFORM.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

DEAR SIR,—We are somewhat surprised at Messrs. Macfarlan & Co.'s assertion that we have changed our ground on the subject of pure and methylated chloroform.

From the first we have admitted that "Chloroform from *any* source (the italics are now added) could be so purified that it would be impossible to discover from what it was made;" and we expressly stated that our remarks applied to "commercial samples" of the two articles, that is, such as are usually met with in the trade. This will be seen at once by reference to our letters in the June and August numbers of THE CHEMIST AND DRUGGIST.

In conclusion, we are still willing to meet Messrs. Macfarlan, and test our power of discrimination in the way suggested in our last letter, and we decline to accept their offer to send special samples supplied by themselves for our inspection.

We claim that, in order to obtain a fair commercial result (satisfactory to all parties), the samples should be obtained from some neutral source, in either quarts, pints, or any other package.

We are, &c.,
DUNN & CO.

Stirling Chemical Works,
West Ham, E.
October 12, 1878.

REFORMING THE COUNCIL.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

SIR,—In reference to Mr. Wade's suggestion as to "Council representation," I think there are many chemists like myself, at present abstaining from membership, who would willingly join the Society if certain that others would do so also.

There is nothing inconsistent in this, for although numbers are made up of units, yet whilst those individual units remain ignorant of each other's opinions and intentions they will have very little inclination to combine.

If I, for one, could be sure that a considerable number of "Radical" pharmacists would unite with me in joining the Society, I would willingly become a member; and I have little doubt that many other chemists have similar sentiments to this.

Perhaps if Mr. Wade would consent to receive names of those thus inclined, *on such conditions*, he would take a material step towards the object he advocates.

I am, sir, yours obediently,
W. L.

CROTON OIL.—A butcher named Beswick, of King Street, Knutsford, has been before the magistrates charged with administering croton oil to a girl named Sarah Gosling, with intent to do her grievous bodily harm. The case was clearly proved, but as the prosecution did not wish to press the case, Beswick was only bound over to appear if called upon at the Quarter Sessions.

MEDICAL GLEANINGS.

THE RUSSIAN KITCHEN BEETLE is bigger, and redder, and generally uglier than ours, and, in addition, it stinks terribly. Naturally, therefore, it suggests itself as a remedial agent. The Russian peasantry dry it and powder it, and take about one gramme for a dose as a diuretic. Huterberger and others in St. Petersburg have lately experimented with and found it to possess very decided diuretic properties.

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THE ASSIMILATION OF QUININE.—M. Personne, says the *Doctor*, finds that about one-half of the quinine taken by the mouth is destroyed in the system. He found that all the quinine which is eliminated by the urine and soluble in acids can be transformed into neutral sulphate of quinine without appreciable residue; also that a resinous material is obtained, insoluble in acids, and similar to that which is obtained during the extraction of the alkaloids of cinchona. Hence it is inferred that the quinine which is eliminated by the urine, about half the amount ingested, has not undergone any appreciable modification.

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THE TREATMENT OF INSANITY.—Dr. George H. Savage, one of the physicians of Bethlehem Hospital, would not quite hopelessly shake his head if Macbeth's famous query were addressed to him. In a recent article published in Guy's Hospital Report he makes some important remarks on the treatment of insanity by means of drugs. Morphia, for instance, is a valuable remedy in many cases of melancholia. In such cases a regular administration of morphia will often keep the patient quiet and happy, and by thus controlling the symptoms a cure may be expected to follow in time. This drug has also proved useful in cases resulting from over stimulation, but in ordinary acute mania, general paralysis, profound melancholia, or complete dementia it is of no avail. The author doubts if the evils resulting from the use of chloral have not more than balanced the benefits. Occasional cases of violent mania have, however, been found benefited by this drug. A combination of chloral and camphor (10 grains of each rubbed up with simple syrup) has produced good effects, especially in cases of maniacs who were filthy or lascivious in their habits. The camphor seems to counteract some of the evil effects of the chloral, such as loss of appetite and flesh. Conium, hyoscyamine, and bromide of potassium are not spoken of favourably. Stimulants judiciously administered are of the utmost importance. Dr. Savage remarks on the improvement often subsequent to, if not consequent on, such attacks as gumboil, erysipelas, gout, &c. The *Medical Press*, commenting on this, suggests that counter-irritation might perhaps be more frequently adopted as a means of treatment.

⁂

SUBNITRATE OF BISMUTH AND OXIDE OF ZINC.—Professor Gubler remarks in the *Bulletin de l'Academie* that subnitrate of bismuth, like all other dry powders, is a mechanical absorbent. It is also a reliable antacid, for while it does not attack carbonic acid, it entirely absorbs the excess of normal acids in the gastric juice, and especially those formed accidentally by the decomposition of alimentary and other matters in the *primæ viæ*—acetic, lactic, and volatile fatty acids. The basic salt has the further great advantage that it absorbs sulphuretted hydrogen, and by double decomposition forms with sulphide of ammonium, nitrate of ammonium and sulphide of bismuth. Few substances can fully replace bismuth in this respect. Chalk, otherwise so cheap, handy, and inoffensive, does not combine with sulphuretted hydrogen. Oxide of zinc alone fulfils all the functions of bismuth, but it easily becomes nauseating and emetic. It is noteworthy that this inconvenience only occurs when small doses ($\frac{1}{20}$ to $\frac{1}{5}$ gramme) are employed. These always meet with sufficient acid in the stomach to convert them into neutral salts. When larger doses from ½ to 4 grammes a day are given emesis never occurs, especially when sufficient sodium bicarbonate is given with it to neutralise the acids in the *primæ viæ*. This compound acts quite as efficiently as bismuth in the cases in which the latter is specially indicated. Zinc oxide has this advantage over bismuth, that its sulphide is white, so that it neither masks the presence of blood in the stools nor makes the timid fear the presence of melæna.

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KANGAROO-TENDON SUTURES.—At the meeting of the Medical Society of Victoria held on December 5, 1877, Mr. Girdlestone exhibited some carbolised kangaroo tendons prepared from the kangaroo's tail for ligatures and sutures. About 90 can be obtained from each tail from 9 to 18 inches long, and of various diameters, so that they need not be split. They are stronger and more durable than catgut, and knots tied in them do not slip. Dr. McMillan stated that a patient had used kangaroo tendon bougies in a case of stricture. Mr. Girdlestone also exhibited silk for the same purposes, made impervious, by soaking for twelve hours in a strong ethereal solution of mastic, and flexible, by momentary immersion in compound tincture of benzoin. Knots made in it do not slip; deep sutures have been left in place for a week without setting up irritation or suppuration, and stitches made with it can be withdrawn without causing much pain.

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WHY CERTAIN DRUGS ARE MEDICINES.—Dr. John Day, of Geelong, has read a paper before the Medical Society of Victoria, in which he endeavours to give a chemical explanation of the medical properties of certain drugs. The following is a summary of his theory. The oxygen contained in the blood is known to be in a more active condition than that of the atmosphere. Schönbein believes that the colouring matter of the blood is the cause of this change in the inspired oxygen. Human, like other fats, when separated from the body and exposed to the air, absorbs oxygen and produces hydroxyl; under similar conditions the colouring matter of the blood decomposes hydroxyl into water and chemically active oxygen. Fat exists in the blood in a fine state of division and in considerable quantities. On these grounds Dr. Day believed that the inspired oxygen is first converted into hydroxyl and then into active oxygen by the above reactions. Not only human fat, but cod liver oil, turpentine, and other essential oils, resin, guaiacum, myrrh, and ether, all have the power of converting atmospheric oxygen into hydroxyl, and by this power Dr. Day would explain the value of cod liver oil in phthisis, scrofula, and other diseases of imperfect nutrition and oxidation, of myrrh as an astringent, of guaiacum in chronic rheumatism, and of oil of turpentine in typhoid fever. Dr. Day would wish it to be clearly understood that he does not for a moment entertain the absurd idea that the property of imparting active oxygen to the blood is the sole virtue possessed by any of the substances brought under notice; but he thinks that those substances which, from a chemical point of view, may be supposed capable of aiding Nature in oxidising and carrying off the effete materials of the body are deserving of a high rank among our remedial agents.

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CALCIUM SULPHIDE IN THE TREATMENT OF ACNE.—Dr. Howard Cane, of St. Albans, records in the *Lancet* of August 17 his success in the cure of acne by means of calcium sulphide. The remedy had been recommended some years before by Dr. Sydney Ringer, but was adopted by Dr. Cane as a last resource. Metal ornaments should not be worn while it is being taken, as sulphuretted hydrogen is given off from the skin and lungs, which tarnishes them greatly. The first case in which it was tried was a most obstinate one of five years' standing, which had been treated by several physicians without the slightest permanent success. Sulphide of calcium was ordered in doses of $\frac{1}{10}$ of a grain four times daily, with 4 grains of powdered loaf-sugar. At the same time the patient was directed to hold her face over a vessel of very hot water night and morning for some ten minutes or more, and then to rub the parts where the little black-topped pimples were very thick with a towel, after which she was to use as a face powder some precipitated sulphur, coloured with Armenian bole. At the same time minute and careful directions were given as to diet, &c., forbidding pastry and flour puddings of all kinds, all salt meats, together with pork and veal, and all stimulants, and likewise enjoining the quent use of all green vegetables, especially cabbage, water-ss, and salad generally, together with regular outdoor walk exercise. The dose was increased every fortnight until it ched a grain six times a day. At the end of five months cure seemed complete, and the dose was gradually re-ced until it was only to 1 grain a day. Fifteen other ses have been treated in this way, in twelve of which the re was complete; in the remaining three great benefit was rived. It is now recommended to begin with ¼ grain four nes daily, and increase it to 1 grain six times a day, cording to the progress and severity of the case.

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Cure of Cataract.—Dr. W. L. Dodge, of Phila-lphia, records a case which had been diagnosed as cataract the best physicians of Philadelphia, and the knife pre-ribed as the only possible remedy. An old woman advised e patient to drop into the eye, oil from a rabbit twice a day. is was done, and in six months the sight was entirely stored.

The Three Degrees in medical treatment—Positive, ill; mparative, pill; superlative, bill.—*N. Y. Medical Times.*

A Baker has invented a new kind of yeast that makes ead so light that a pound loaf weighs only twelve ounces.

An Iowa Paper mentions the accidental shooting of a ctor and a lawyer, and has "strong fears of their recovery."

She who composes a cross baby is greater than she who mposes books; and with the aid of soothing syrup it is uch easier done.

True Friendship grows stronger with age. The same mark applies to butter, and in Morocco aged butter is as uch esteemed as an old friend.

"Keep 'em alive, boy—keep 'em alive!" said an old phy-cian to his young brother practitioner. "Dead men pay bills."

Hard on the Profession.—A lay contemporary says at "America has one physician to every 800 inhabitants. hat is, they begin on that basis, but after that there are not many inhabitants."

Science made Easy.—Friend to Scientific Authority: Doctor, how is a man to tell a mushroom from a toadstool?" cientific Authority: "By eating it: if you live, it is a ushroom; if you die, it is a toadstool."—*Druggists' dvertiser.*

Bee Stings are now said to be a good remedy for eumatism. As the bees are to apply the remedy, per-aps it would be well enough to see that they don't put e dose in the wrong place in the hurry of the moment. ees are sometimes very impulsive.—*Druggists' Advertiser.*

A Clever Advertising Dodge.—The San Francisco *vening Post* says: "An ingenious tailor of this city got a lot empty pop bottles, put one of his business cards in each, en wrapped up every bottle separately in a poisoned ten-erloin steak, and threw them into the bay from the ferry oats, one by one. He naturally supposed that the meat ould be swallowed by sharks; that the poison would kill e latter; that the fish would float ashore, be cut open, the ottles discovered, the fact reported by the newspapers, and n original and effective advertisement secured. That was recisely what happened. Day before yesterday a yachting arty picked up an immense shark not far from Alcatraz. In s stomach was found one of the bottles alluded to, and the ard it contained handed to a reporter of this paper. The ame of the clever merchant it contained will be published t our regular advertising rates, if so directed by him. See erms on inside page."

The City of Reading, Pa., distributes disinfectants to persons desiring them free of charge.

Love and Peppermint.—In the ladies' waiting-room at the Central Depôt the other day were a newly-married couple from Grass Lake. They had been visiting in the city two or three days, and were then ready to go home. They sat side by side, of course, his arm round her waist, and she leaning on his shoulder. A long-waisted stranger from the East, having weak eyes and a big heart, walked in, saw them thus seated, and in about a minute he asked of the husband, "Has that woman there got the toothache?" The husband looked up in surprise, but made no answer. After two or three minutes the long-waisted man again remarked, "If that woman has got the toothache, I have a bottle of peppermint in my satchel here." The bride rolled her big eyes around, and the husband looked somewhat embarrassed. The man from down East unlocked his satchel, fumbled among shirts and collars, and brought up four ounces of peppermint essence. He uncorked it, touched the contents of the bottle against his big red tongue, and, handing it forward towards the husband, said feelingly, "Just have her sop some on a rag and rub her gums with it. We've used it in our family for——." The bride's eyes threw out sparks as she lifted her head from its loving position and, striking at the bottle, snarled out, "Tuthache, you fule! If you don't know the difference 'tween true love and the tuthache, you had better go to grass with the geese!"

Foreign Items.

Olive Oil Crop.—Forward reports state that the oil crop in the Ionian Isles promises to be especially good.

Metallic Tungsten, chemically pure, is now manufactured in Hanover at a very low price.

Perfumery.—The first invoice of perfumery ever shipped from the United States to England was despatched from Philadelphia in August.

Montana, with a population of 50,000, has no failures in a year. It is said, however, that they hang insolvent debtors there.

Between January 1 and August 1, 1878, 63,618½ lbs. of opium and 46 packages of undeclared weight were entered at the port of New York, and 3,451 lbs. at the port of Boston, being a total of not less than 67,100 lbs.

Cholera is raging in Morocco. Our imports from that country are orris root, caraways, cummin, fenugreek, almonds, gum, olive oil, and sandarac. Rose leaves are exported to France.

A fine quality of lamp-black, called diamond black, is made at Gambier, Ohio, by the combustion of the natural gas issuing from two wells. The yearly production is about 16 tons, and the quality is excellent.—*Chemiker Zeitung.*

American Wax.—The extent of apiculture in America is so considerable that the product of wax in the United States is stated to be 20,000,000 lb. annually, valued at about $6,000,000. Of this about $600,000 worth are exported, and $1,200,000 worth of honey also goes abroad.

Amber is found in Roumania. It differs in colour from that obtained on the coasts of the Baltic, being occasionally rose, red, brown, blue, green, and black. Specimens are occasionally found containing veins and spots resembling silver and gold in colour. In chemical composition and probable origin the Roumanian amber does not differ from the Prussian.—*Chemical News.*

Greek Sponge Fishery.—The *Athens Messenger* states that the value of the sponge fishery in Greece has risen from 20,000f. in 1870 to 2,000,000f. in 1877. The trade employs above 120 vessels, manned by 800 men. Each boat goes out four times a year, and obtains 100 kilogrammes of sponge, at a mean value of 30,000f. The preparation of the sponges is very simple and inexpensive. They are first dried in the sun, and then separated into two different qualities, the average price of the first quality being 35f. or 40f. the kilogramme.

In 1877 France contained 6,232 pharmaciens; the number has increased by 471 during ten years. The proportion of population to a pharmacien varies in different parts of the country, from 2,958 in Seine to 18,798 in Morbihan, the average being 11,500. In 2,453 communes pharmaciens have shops, the remaining 33,603 have not one between them.

A Trades Exhibition will be held next year in Berlin, the building for which has been definitely designed. It is to cover 20,000 square mètres. It is also decided that an International Art Exhibition shall be held in Munich next year. The King of Bavaria has accepted the post of patron, and it is intended that a similar exhibition shall be held every four years.

Mad Dog.—A German gamekeeper (W. Gassel), 82 years of age, states in the *Leipziger Zeitung*:—"I do not wish to bury with me my much-approved remedy against the bite of mad dogs, but will make it publicly known; that is the last service I can render to the world. 'Take some warm wine-vinegar, and luke-warm water, wash the wound thoroughly with it, and dry it. Then pour a few drops of muriatic acid on the wound, because mineral acids destroy the poison of the saliva.'"

Mint and Absinth.—Some experiments have been recently made in the Department of the Seine, on the influence of sewage on crops. The yield of mint was 40,000 kilos. to 50,000 kilos. per hectare (31,160 lbs. to 38,950 lbs. an acre); of absinthe (2 cuttings), 110,000 kilos. to 120,000 kilos. per hectare (85,690 lbs. to 93,480 lbs. an acre); of angelica, 28,000 kilos. a hectare (21,812 lbs. an acre) the second year.

Nitrate of Soda in Peru.—The Providencia Bank of Peru has arranged a contract with the Government respecting the nitrate. The bank acts for itself and a number of capitalists, and undertakes to ship and sell nitrate manufactured for Government account, to raise a loan on the nitrate deposits in order to procure funds with which to meet the interest and sinking fund on the nitrate certificates, and to manage the deposits. Under this contract the Government will receive 60,000*l.* from August 1, 1878, and service of the nitrate certificates will be promptly executed. The bank undertakes to lend 1,000,000*l.* in excess of the requirements of the Government, this excess to be employed in carrying on the public works which are now paralysed through want of funds.

Bahama Sponge Fishery.—The *Journal of Applied Science* states that the supply of the best and largest sponges at the Bahamas fisheries is certainly diminishing, and there is no fresh ground to work on in that district. Ten years ago the quantity shipped was to the value of 40,000*l.*, and in some subsequent years it reached 30,000*l.* and more. The following were the exports, classification, and value of sponges in 1876:—

Kind	Quantity	Value
	Cwts.	£
Boat	203	763
Glove	168	575
Grass	744	1,621
Hardhead	272	1,241
Reef	197	2,373
Refuse	203	386
Velvet	477	4,765
Wool	427	5,273
Yellow	135	340
	2,826	17,337

In the same year the very commonest Levant sponges cost 1*s.* 2*d.* a pound in Crete, while the best of the Bahamas, according to the prices quoted above, cost only 2*s.* 2*d.*

Major Frederic McNair, in his recent work, "Perak and the Malays," states that the camphor tree does not grow in Perak, though it is believed to exist at Salangore. "The gutta tree is tolerably plentiful, and its curious gum is extracted by cutting down the whole tree, tapping it on the under side, and allowing the gutta to exude into vessels placed for its reception. This gum is frequently used by the young Malays to catch birds, forming a most glutinous bird-lime. The name by which it is known in England—guttapercha—many people may not be aware, is rather a redundant one, percha being only the native name for Sumatra, whence the gutta was perhaps originally brought." In the same work we read:—"Large quantities of wood oil or kayoo minyati (gurjun balsam) are also obtained by the Malays by cutting a triangular hole right into the trunk of a forest tree, and placing therein a cup or half a cocoanut shell. Fire is then applied, and the oil is melted and drops into the cup. This oil forms a kind of varnish, and is used for the interior work of their houses, and sometimes as a medicine. It is also used, either alone or mixed with sugar of lead and red arsenic, to prevent the attacks of white ants." Bates, in his "Naturalist's Voyage on the Amazon," mentions that the best way to keep insects out of the beds and meat-safes is to set the feet of the one in little vessels of copaiba and anoint the wires which suspend the others from the ceiling with the same liquid.

Trade Notes.

Mr. T. H. Tomkys, late of Oakengates, Salop, has purchased the business of Mr. T. A. Wedge, of 80 Victoria Street, Wolverhampton.

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It will be noticed from our advertising section that Messrs. S. Maw, Son & Thompson have opened a department for Havannah cigars.

⁂

The Drug Business formerly carried on by Messrs. Bennett & Harvey, at Castle Gate, Newark-on-Trent, is now in the hands of Mr. William Bennett solely.

⁂

North British Oil and Candle Company, Limited.—Resolved July 19:—That the company be wound up.

⁂

Borax Company, Limited.—Resolved July 16:—That the company be wound up, and that Mr. C. T. Starkey, Birmingham, accountant, be liquidator.

⁂

Mr. John Frank, Pharmaceutical Chemist, of Whitby, has succeeded to the old-established business of Mr. Alfred Court, of 35 Bull Street, Birmingham. The business was valued and transfer completed by Mr. Brett, of Leicester.

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Mr. Silverlock has sent us samples of his various styles of Sachet Almanacs, Presentation Almanacs, and Card Almanacs for 1879. These are prepared with the special design of promoting a chemist's business, by combining a list of the most usual preparations with an elegantly printed almanac, which can be perfumed at pleasure.

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The Extract of Malt manufactured by the Trommer Extract of Malt Company, Fremont, Ohio, United States, is now introduced to the English trade through Messrs. Lynch & Co. As attention has recently been directed to the peculiar value of malt extract as an aid to digestion, and a consequent nutritive agent, this preparation in the various forms in which it is supplied will be examined with interest. It is prepared alone or in combination with such medicines as cod liver oil (as an emulsion, disguising the taste of the oil and making it more easily digestible), pepsine, hypophosphite of iron, &c. We should suggest that the article will, no doubt, come within the new regulations of the Board of Inland Revenue, that is, it will not be safe to sell it without a medicine stamp.

Messrs. Seabury & Johnson, the makers of indiarubber isters, have removed from Red Lion Square to larger emises at 11 Jewin Crescent, Aldersgate Street. They form us that the introduction of their plasters to this untry has been very successfully accomplished, and at we may regard them as permanently established in ndon.

⁂

Mr. C. J. King, wholesale perfumer, of Holborn, has sent a sample of ladies' hair, partly of the natural black and rtly of a golden hue, produced by G. Dorez's "Aureolus," r which preparation he is the wholesale agent. The tint n be produced of any shade, from auburn to sunny golden, d the hair thus treated has no appearance of having been ed. The makers also declare that its texture is in no gree injured.

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The Glass Trade in Yorkshire and the North of England in a very depressed state. During the last fortnight tice has been given by many firms to their workmen that eir present engagements must terminate immediately. essrs. Ryland & Codd, of Barnsley, have decided to close o shops. On the Tyne about 600 men have received tice that their services at present rates are no longer quired. Messrs. Chance Bros. & Co. have given notice of a duction in wages to all their men employed in the plate partment. The notice will expire on October 19, and it feared a strike may result.

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An Aërated-water Trade.—Messrs. Barrett & Elers ok their large staff for a holiday to the "Welsh Harp," endon, on September 28. The firm employ 20 travellers, d every year they give two prizes—the first to the aveller who scores the most sales, and the second to him ho most largely improves on his preceding year's exploits. he first prize—a handsome gold watch—was this year ken by Mr. Allan, whose register for the year reached ,212 dozen! The silver watch was handed to Mr. Wm. agg, who had increased his last year's score by ,930 dozen.

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Messrs. Lynch & Co. have published a new edition of eir catalogue, comprising Drug Sundries, Proprietary rticles, Shop Fittings, and Surgical Instruments. The lume presents a wonderfully concise and complete priced ist of the multitudinous array of stock comprised under ose heads. For convenience and accuracy in ordering, he goods in the first and last named sections are all umbered separately, so that much detail is saved in riting out the order. Prices of most sundries we note re tending downwards, and we may mention that Messrs. ynch & Co. issue along with this general catalogue a pecial list, at net prices for cash, of "proprietary articles," ll the goods being quoted on such terms as to give cash uyers the utmost advantage. We can assure chemists that his special list is quite worthy of consultation.

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Trade Prospects in Cyprus.—Messrs. Barnett, Son & oster, having supplied an aërated water outfit for Cyprus soon fter that island came under British domination, have lately received a few lines from their customer announcing his arrival, nd written in a more hopeful tone than has characterised the etters of some other critics. He says, "I suppose from hat you have read in the English papers you do not think uch of this place, but I think I shall be able to do well ere if there is not much opposition in my line. I have een in many worse places than this. I have got the machine fitted up all right, and sold 100 dozen of stuff the first day." Farther on the writer states that he is not able to get labels printed there, and he also finds a difficulty with the water, as the country is of a very limy nature. That Cyprus will present good openings is beyond doubt, but only men of good judgment and sound constitution are the right sort to risk it.

⁂

Little's Soluble Phenyle—a new antiseptic and disinfecting agent—is a compound introduced by Messrs. Morris Little & Son, of Doncaster, and supplied to the trade by Messrs. S. Maw, Son & Thompson. It appears to be a solution of coal-tar, and no doubt depends on that substance for its properties. It produces a most refreshing and agreeable odour wherever it is used. Its value in the scale of disinfectants can only be properly estimated after a series of comparative experiments, but the makers claim that it is equal in this respect to carbolic acid, without possessing the poisonous and corrosive qualities of the latter. Its capacity for mixing in any proportion with water, and its non-poisonous nature as well as its cheapness, are the special recommendations of this new compound. The product is strongly recommended by many good authorities.

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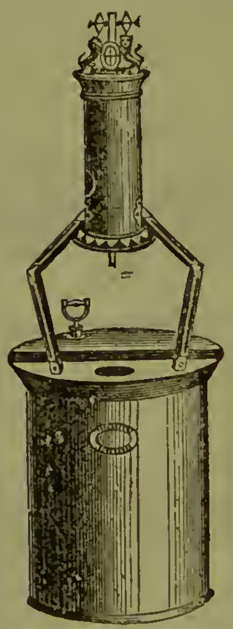
Tupholme's Measuring Apparatus.—This is a very convenient piece of apparatus, which will destroy much of the unpleasantness of retailing petroleum and other liquids. The engraving representing it shows a reservoir, which may be either inserted flush with the counter or placed in the cellar, or in any other convenient place. The handle on the top of the reservoir works a pump, which forces the liquid into the cylinder raised above the reservoir. In this cylinder are floats which indicate the exact amount of liquid pumped up. On turning a tap the liquid flows from a spout just visible at the bottom of the cylinder into any vessel which may be placed to receive it. Any spillings are returned to the reservoir by the hole shown, which is protected by several layers of wire gauze from all danger of fire. The whole seems a very ingenious and useful contrivance.



Pilocarpin a Poison.—M. Duchenne relates a case in which symptoms of poisoning were produced by an exceedingly slight dose of pilocarpin. Of a solution formed of 20 centigrammes (about three grains) of pilocarpin in 200 grammes (about 50 drachms) of water, eight drops were injected, and some hours after, a second dose of five drops was employed with the effect of producing the symptoms in question.—*Gaz. Hebd.*, July 9.

Obituary.

ALMOND.—On August 27, 1878, Mr. Thomas Almond, chemist and druggist, Sussex Street, Leeds, aged 54 years.

ASHBY.—On September 4, 1878, Mr. Thomas Lacey Ashby, chemist and druggist, Penzance, aged 27 years.

COCK.—On August 28, 1878, Mr. John Cock, chemist and druggist, Penzance, aged 36 years.

COOPER.—On September 10, at his residence, 15 Hanover Street, Leicester, Mr. Thomas Cooper, pharmaceutical chemist, aged 73 years. Deceased had carried on business in the Market Place since 1833, and recently retired on account of ill health in favour of his son, Mr. Henry Cooper, and Mr. William Sturgess

MARKHAM.—On September 6, at Lake Port, Lake County, California, William Charles Markham, fourth son of Mr. Markham, chemist, Reigate, aged 24 years. Deceased was manager of Mr Thornton's Drug Stores at Lake Port, and also Professor of Chemistry at Kelly's Institute, of the same place.

MURDOCH.—On August 7, 1878, at Dunedin, Mr. John McGill Murdoch, chemist and druggist, of Sauchiehall Street, Glasgow. Mr. Murdoch became an Associate of the Pharmaceutical Society in 1872.

PRICE.—On September 7, 1878, Mr. Joseph Rees Price, chemist and druggist, Week Street, Maidstone, aged 54 years.

ROOKE.—On September 21, 1878, Mr. Robert Barrett Rooke, chemist and druggist, Notte Street, Plymouth, aged 61 years.

ROWDEN.—On July 18, Mr. James Rowden, chemist and druggist, Calne, aged 72 years.

PATENTS

[The following list has been compiled expressly for THE CHEMIST AND DRUGGIST by G. F. Redfern, Patent Agent, successor to L. de Fontainemoreau & Co., 4 South Street, Finsbury, London; and at Paris and Brussels.]

Applications for Letters Patent :—

Alkali.—No. 3783.—H. Gaskell, of Widnes, Lancashire, alkali manufacturer. Improvements in the manufacture of alkali. Dated September 25, 1878.

Bottle-stoppers.—No. 3614.—J. C. Haddan, of 14 Akerman Road, Brixton, London, civil engineer. Improvements in bottle-stoppers. Dated September 12, 1878.

Bottle-stoppers.—No. 3651.—J. Worthington, of Blackpool, Lancashire, plumber. Improvements in stoppers for bottles. Dated September 16, 1878.

Bottle-stoppers.—No. 3807.—L. Vallet, of Liverpool. Improvements in and relating to stoppers, and bottles for containing aërated, gaseous, or other liquids, and in apparatus employed for bottling such liquids, and means of stoppering. Dated September 27, 1878.

Carbonate of Soda.—No. 3599.—L. Mond, of Northwich, Cheshire, manufacturing chemist. Improvements in the treatment of brine for the production of carbonates of soda and salt. Dated September 11, 1878.

Cyanides.—No. 3621.—W. Weldon, of Rede Hall, Burstow, Surrey Improvements in the manufacture of alkaline and earth metal cyanides. Dated September 13, 1878.

Digestible Syrup.—No. 3884.—E. Beanes, of Dulwich, Surrey. A new or improved manufacture of syrup to be used for digestible purposes in food. Dated October 3, 1878.

Dyeing.—No. 3699.—J. Law, of Castleton, near Manchester, manufacturing chemist. An improved preparation to be used as a substitute for the oil baths or fatty matters usually employed in dyeing Turkey red or madder colours, including artificial alizarine colours. Dated September 18, 1878.

Filters.—No. 3618.—H. Rawlings, of 108 St. Martin's Lane, London. Improvements in filter presses. Dated September 13, 1878.

Filters.—No. 3746.—W. White, of Chancery Lane, London. Improvements in the manufacture of filters and filtering material. Dated September 21, 1878.

Filters.—No. 3748.—G. E. Haycraft, of the Broadway, Deptford, Kent, ironmonger, and E. Johnson, of Greenwich, Kent, sanitary engineer. Improvements in cistern filters. Dated September 21, 1878.

Grinding Linseed Cake.—No. 3825.—W. Rowlandson, of the Liverpool Millwright and Engineering Works, Liverpool. Improvements in the mode of, and in apparatus for, grinding or pulverising linseed cake and other substances. Dated September 28, 1878.

Invalids' Bedsteads.—No. 3560.—M. Stubley, of Carlinghow, Batley, Yorkshire. A new or improved invalid's bedstead. Dated September 9, 1878.

Iodine and Brome.—No. 3844.—C. M. Sombart.—A communication from H. Beckel and R. Muller, jun., both of Schoenebeck, near Magdeburg, Germany. Improvements in procedure and apparatus for producing iodine and brome. Dated September 30, 1878.

Lozenges.—No. 3806.—J. Wilson, sen., and J. Wilson, jun., both of Glasgow, North Britain. Certain improvements in the manufacture or construction of lozenges, whereby the same, in addition to their ordinary usage, are rendered useful for educational purposes, and for purposes of amusement. Dated September 27, 1878.

Magnetic Clothing.—No. 3528.—W. Wilson, of Cork, Ireland. Improvements in the manufacture of magnetic clothing, such as belts, lung invigorators, knee caps, &c., &c., applicable to any part of the body. Dated September 6, 1878.

Medicinal Plant.—No. 3529.—C. D. Rowe.—A communication from A. Borchers, of Valparaiso, Chili. Improvements in and relating to the use and preparation of the *Eugenia cheka*, a plant indigenous to the soil of Chili, not hitherto known or used as a medicine in Great Britain. Dated September 6, 1878.

Pigments.—No. 3741.—W. A. Barlow.—A communication from A. E. Méry, of Paris, artist. Improvements in the manufacture or preparation of pigments or colours for use in the arts and manufactures. Dated September 21, 1878.

Syringes.—No. 3644.—G. J. Stanford.—A communication from W. W. Stewart, of Brooklyn, N.Y., United States. Improvements in syringes. Dated September 16, 1878.

Sulphurous Acid.—No. 3701.—J. Mactear, of Glasgow, chemist. Improvements in apparatus for obtaining sulphurous acid. Dated September 19, 1878.

Sulphate of Ammonia.—No. 3694.—R. W. Wallace, of Mark Lane, London. Improvements in the manufacture of sulphate of ammonia and in apparatus therefor. Dated September 19, 1878.

Testing Oil.—No. 3684.—W. E. Yates and W. Porritt, both of Manchester. Improvements in machinery or apparatus for testing oil. Dated September 18, 1878.

Letters patent have been issued for the following :—

Artificial Teeth.—No 2708.—A. E. Harris, of Mile End Road, London surgeon-dentist. An improved spring action for artificial teeth. Dated July 6, 1878.

Barrels.—No. 2750.—W. R. Lake.—A communication from A. W. Blye, of Syracuse, N.Y., United States. Improvements in barrels for holding volatile liquids. Dated July 9, 1878.

Bottle-stoppers.—No. 1410.—W. R. Lake.—A communication from F. Koeller, of Neulengbach, near Vienna, Austria, doctor of medicine. Improvements in the manufacture of stoppers for bottles and similar receptacles. Dated April 9, 1878.

Carbon Tissue.—No. 2631.—O. Sarony, of Scarborough, Yorkshire, and J. R. Johnson, of Red Lion Square, London. Improvements in the manufacture of "Pigment" compound, to be used in the preparation of carbon tissue. Dated July 1, 1878.

Camphor Tablets.—No. 2217.—W. R. Lake.—A communication from W. F. Simes, of Philadelphia, Penn., United States. Improvements in the manufacture of tablets, cakes, or blocks of camphor Dated June 3, 1878.

Colouring Matters.—No. 1715.—F. Wirth.—A communication from W. Meister, E. Lucius, and A. Brüning, doctors of philosophy, all of Höchst-on-the-Maine, Germany. Improvements in colouring matters and in the manufacture of the same. Dated April 29, 1878.

ring Cancers, &c.—No. 3005.—L. J. Dart, of Albion, Cal., United States. An improved compound and process for the cure of cancers, tumours, corns, warts, and similar excrescences. Dated July 29, 1878.

vaporating Saline Solutions.—No. 3109.—S. Pitt.—A communication from P. Piccard, of Lausanne, Switzerland, engineer. Improvements in the mode of evaporating saline solutions, and in apparatus used for that purpose. Dated August 6, 1878.

ilters.—No. 1957.—A communication from A. L. G. Dehne, of Halle-on-Saal, Germany. An improved arrangement or construction of filter press for the more perfect lixiviation or washing of the cakes of solid matter formed in filtering chambers. Dated May 15, 1878.

valids' Tables.—No. 1524.—B. Barnard, of St. Paul's Road, Canonbury, London. Improvements in washing and dressing stands and tables for invalids and others, which improvements may be applied to other articles of furniture or use. Dated April 16, 1878.

oap.—No. 2486.—H. B. Gross, of Liverpool, Lancashire. Improvements in soap or soap compounds. Dated June 22, 1878.

igments.—No. 1281.—C. Leech and T. Neil, both of Derby, manufacturers. An improved process and apparatus for calcining sulphate of iron or other compounds of iron oxide and sulphuric acid, or the like, for the manufacture of pigments, and the utilisation of the sulphurous acid in such compounds. Dated April 1, 1878.

ulphuric Acid.—No. 1084.—W. J. Blinkhorn, of St. Helens, Lancashire, chemical manufacturer. Improvements in the manufacture of sulphuric acid. Dated March 19, 1878.

ulphocyanides and Ferrocyanides.—No. 1148.—W. E. Newton. A communication from J. Tcherniac and U. Gunzburg, both of Paris. An improved process of, and apparatus for, manufacturing sulphocyanides and ferrocyanides. Dated March 22, 1878.

ulphur.—No. 1131.—J. Hollway, of 7 Jeffrey's Square, London. Improvements in the production of sulphur from pyrites and the separation of metalliferous substances therefrom and thereby, and in the means employed therefor. Dated March 21, 1878.

Tartaric Acid.—No. 1384.—F. Wirth.—A. communication from F. Dietrich, chemist, of Murten, Switzerland. Improvements in the manufacture of tartaric acid. Dated April 6, 1878.

Treating Fatty Matters.—No. 1186.—C. N. May, of Devizes, Wiltshire. Improvements in the treatment of oily or fatty matters, or materials containing the same, and in the apparatus employed in such treatment and connected therewith. Dated March 26, 1878.

Specifications published during the month :—

Postage 1*d*. each extra.

1878.

376. F. L. Danchell. Filter presses. 6*d*.
498. J. Wadsworth. Apparatus for evaporating and drying sewage, &c. 6*d*
500. J. Hollway. Sulphur. 4*d*.
506. R. H. Corréard. Vessels or receivers for distributing beverages, &c. 2*d*
512. J. Brown. Bottles, &c. 2*d*.
519. A. S. L. Leonhardt. Recovering arsenic from the residue of magenta colour. 6*d*.
530. A. Harrison. Effervescent beverages. 2*d*.
551. A. Clark. Syrups, mineral waters, &c. 4*d*.
652. J. Shneltz. Machines for corking bottles. 6*d*.
620. G. Richards. Apparatus for stoppering bottles. 4*d*.
625. M. Wilson. Appliance for corns, &c. 2*d*.
630. A. M. Clark. Dyeing and printing with derivatives of aniline. 4*d*.
647. A. M. Clark. Saccharification of amylaceous matter. 4*d*.
704. H. Schwarz. Filters for casks, &c.. 6*d*.
714. A. M. Clark. Decolorising solid and liquid matters. 2*d*.
721. W. Bull. Apparatus for filling and corking bottles. 2*d*.
733. H. Sandeman. Wine-sampler. 6*d*.
740. P. Jensen. Filtering apparatus. 6*d*.
765. M. Mattson. Enema syringes. 6*d*.
771. E. P. Alexander. Manufacture of sulphate of alumina. 4*d*.
781. J. Mansley. Bottle-stoppers. 2*d*.
786. J. H. Johnson. Production of colouring matters for dyeing and printing. 4*d*.
804. P. S. Brown. Obtaining sulphate of ammonia from ammoniacal liquors, &c. 6*d*.
806. J. A. R. Hildebrandt. Respiratory apparatus. 6*d*.
815. J. Mactear. Utilising bye-products of soda and potash manufactures. 4*d*.
829. R. L. Johnson. Respirators, &c. 2*d*.
833. A. George. Soap. 2*d*.
2213. Elizabeth J. Corbett. Removing and destroying gases from sewers, 4*d*.

BANKRUPTCIES.

Batman, George Booth, White Lion Street, Norwich, chemist and druggist. October 2.

Boissie, Alfred, 10 Arundel Street, Haymarket, and Rio de Janeiro, Brazil, perfumer. September 20.

LIQUIDATIONS.

Abbott, Abraham, trading as Chambers & Co., 20 Newborough Street, Scarborough, chemist. September 27.

Atkinson, Thomas Fairhurst, 7 Dalton Street, Chorlton Road, near Manchester, late 16 Chapman Street, Hulme, aërated water manufacturer. September 4.

Cartwright, John Jordan, Clifton House, Shrivenham, and 70 High Street, Camden Town, surgeon-dentist. September 30.

Cupiss, Thomas, Baldock Street, Ware, chemist and druggist. September 27.

Davies, Richard Morgan, 10 King Street, Carmarthen, and Llandyssul, Cardigan, chemist and druggist. September 17.

Denton, Henry Thomas John, 128 Exeter Street, and 9 Windsor Place, Plymouth, chemist and druggist. October 1.

Gregory, Thomas, Whitford Street, Holywell, chemist and druggist. September 17.

Hassall, Elijah, 8 Grenville Terrace, Ashton-under-Lyne, chemist, late High Street, Stalybridge. August 31.

Hutchinson, George, Jun., & Shipley, George, trading as Hutchinson & Co., Ouseburn, Newcastle, oil and lard refiners. September 7.

King, Henry George, 1a late 14 Abbott Street. Kingsland, wholesale druggist and drysalter. September 7.

Kingsbury, William John, & Moss, Augustus, trading as Kingsbury & Moss, 14 Castle Road, Colchester, aërated water manufacturers. September 25.

Milner, Edward, Rainford, surgeon. October 3.

Munro, Hugh, 365 Park Road, Soho, Handsworth, chemist and druggist. September 19.

Osmond Joseph, Swindon, aërated water manufacturer. September 30.

Read, Charles, Banwell, chemist and druggist. September 3.

Sherwin, George, South Street, Castle Town, Stafford, soda water manufacturer. September 18.

Simmonds, Henry, Swan Street, Warwick, aërated water manufacturer. September 24.

Staning, William, 55 Cogan Street, Hull, chemist and druggist. September 30.

Varney, Thomas, 16, 17, and 18 Frederick Street, Marine Street Bermondsey, ginger beer and mineral water manufacturer. September 2.

PARTNERSHIPS DISSOLVED.

Bennett & Harvey, Newark-on-Trent, Notts, chemists and druggists. August 25.

Blakeley, F. W., & Co., Midland Soap Works, near Wakefield, soapmakers, April 1.

Coveney & Hirst, Prestwich, Lancaster, surgeons. September 30.

De Lessert & Bödecker, Wolverhampton, surgeon-dentists. September 30. Debts by C. G. De Lessert.

Haworth & Priest, Church, chemists.

Higgins & Smith, Barton-upon-Humber, Lincoln, wine, spirit, and beer merchants, chemists, and druggists. September 4.

Spiller, Lee & Martin, Birmingham, medical agents. September 11.

Staniland & Bean, 34 Gloucester Lane, Bristol, physicians and surgeons. September 23.

Walsh & Co., 10 Argyle Street, Regent Street, Mx., druggists' sundrymen. October 3. Debts by C. Cristadoro.

Wyer, Daniel, & Wyer, George, Falkingham, Lincoln, veterinary surgeons. September 4.

DIVIDENDS.

Chapman, Thomas, 87 Hendon Road, Sunderland, chemist and druggist First and final, of 1*s*. 6*d*., at R. R. Edington's, 116 High Street West, Sunderland, on and after September 30.

Langford, Charles, 5 Norfolk Street, King's Lynn, chemist, &c. Second and final, of 8¼*d*., and 6*s*. 8¼*d*. to new proofs, at Moore & Wallis's, 3 Crosby Square, E.C., to London creditors, and at W. B. Whall's, Market Square Chambers, King's Lynn, to country creditors, on September 25 and three following Wednesdays, between 11 and 2.

Pope, Alfred Crosby, 2 Finsbury Circus, London, and Moselle Villa, Lee, surgeon. First and final, of 1*s*., at A. J. Hill's, 1 Finsbury Circus, London, on and after September 27.

EXCHANGE COLUMN.

TERMS.—Announcements are inserted in this column at the rate of one halfpenny per word, on condition that name and address are added. Name and address to be paid for. Price in figures counts as one word.

If name and address are not included, one penny per word must be paid. A number will then be attached to the advertisement by the Publisher of THE CHEMIST AND DRUGGIST, and all correspondence relating to it must be addressed to the "Publisher of THE CHEMIST AND DRUGGIST, Colonial Buildings, Cannon Street, London, E.C.," the envelope to be endorsed also with the number. The publisher will transmit the correspondence to the advertiser, and with that his share in the transaction will cease.

FOR DISPOSAL.

Attfield's "Chemistry," good as new, post free, 10*s.* 6*d.* J. E. L. Bunn, Halstead, Essex.

Two pear-shape show bottles, 9 gallons each, 15*s.* the pair. Fardon & Son, Maidstone.

Taylor's horse and cattle medicines at half invoice price. H. Kemp, Horncastle.

Chemist and Druggist for the last 9 years. Offers wanted. McIver, Dingwall.

Fifty iron 3-gallon bottles, only once used, 1*s.* 6*d.* each, cost double. Scott & Son, Rochdale.

New meerschaum pipes and holders, for drugs, patents, fittings. 32/209.

50 pounds good sound Calumba roots, 4*d.* per lb. Bayley, Chemist, Saltaire.

Microscope, cost 3*l.* 17*s.* 6*d.* What offers? Full particulars given. 34/209.

200 ozs. morphia-hydrochlor. ang., in 1-oz. bottles. What offers? and for what quantity? 29/209.

Manuscript notes on chemistry and pharmacy, genuine, only 3*s.* 6*d.* each. Minor, 4 Harbour Street, Folkestone.

About 4 cwt. of fine Norfolk beeswax, in bulk, 1*s.* 9*d.* per lb. Address, James Watson, Rose Corner, Norwich.

For 31*l.* 10*s.*—No. 4 soda-water machine, with new gas work. Address, A., 32 Buxton Road, Huddersfield.

One pound finest Mitcham oil of lavender, 1874, price 75*s.* Address James Watson, Rose Corner, Norwich.

A quantity of rad. Calumbo, usual quality, 3*d.* lb., in large or small parcels. James Hunter's Executor, Westgate, Dewsbury.

Quantity of teats: small, 3*s.*; medium 6*s.* gross; 6-oz. dispensing bottles, 8*s.* gross; 2 ozs. salicine; what offers? 11/210.

Botany—the officinal and all the important indigenous plants mounted, classed, and named, only 10*s.* 6*d.* Higginson, Newferry, Birkenhead.

250 gallons of Young's crystal oil at 9½*d.* gallon; new oil, being overstocked; sample, two stamps. Henry J. Pratt, Pharmaceutical Chemist, York.

A jacketed 50-gallon copper steam still, worm and tub, complete, 3 feet deep, 2 feet 2 inches diameter. Laboratory, 40 Aldersgate Street, E.C.

Bottles, jars, pill machine, and sundries, suitable for small shop or surgery; also cut crystal fountain. Send for list to Green, Castlegate, Berwick.

Materia medica cabinet, of 150 specimens, each in separate box, 10*s.* 6*d.*; 60 indigenous plants, mounted and named, 5*s.* Tully, Chemist, Tunbridge Wells.

Five doz. 2*s.* Scott's asthmatic cigarettes, six 2*s.* 6*d.* four 1*s.* 6*d.* tins aromatous smoking mixture, what offers? Will be sold cheap. A Parker, Chemist, Uttoxeter.

Improved patent magneto-electric machine for sale, cheap, perfect, mahogany box, highly finished; cash, 27*s.* 6*d.* F. Hines, Jeweller, 332 Coldharbour Lane, Brixton.

A quantity of six-dozen mineral-water cases with lids and divisions; nearly new; price 4*s.* 6*d.* each. Samples on receipt of P.O.O. to Ruston & Co., Exeter.

Two 2/9 Henry's calcined magnesia, 2 2/9 Rowland's odonto, 1 2/9 Oxley ess. ginger; 7*s.* for the lot. Robert Chalmers, Druggist, Greenock.

Evans & Sons' pharmacy microscope, complete, good condition, with polariscope; also cabinet miscellaneous mounts, object glasses, and circles, for 5*l.*, cost 8*l.* 10*s.*, correspondence invited. 15/207.

Fownes' "Chemistry," eleventh edition, published at 16*s.*, clean, unused copy; would exchange for Attfield's last edition, or what offers? Lawrence, 36 High Street, Wavertree, Liverpool.

One doz. Newman & Co.'s 1*s.* 6*d.* packets of chemical transfer paintings for decorative purposes, will take in exchange 1 doz. Beecham or Holloway's pills. I. Slater, Wells, Somerset.

Dr. Chapman's spinal ice bag, new, wholesale price 17*s.* 6*d.*, take 10*s.*, a bargain; Wills' "Materia Medica," coloured plates, cost 10*s.* 6*d.*, take 5*s.* Minor, 4 Harbour Street, Folkestone.

Pfleiderer's mixer for pill masses, &c., fitted on iron bound blocks; original cost about 5*l.* Wanted good scaling and stopping instruments, dental chair, lathe, or drugs. X., 251 Gray's Inn Road, W.C.

Baker's patent sieve and mixing machine, complete and new, four sizes, Nos. 2, 4, 5, 6, or 200, 600, 2,500, and 5,000 holes to the square inch; price 10*s.*, or exchange. Woodhouse, Chemist, Ludlow, Salop.

A small electro-magnetic machine, single magnet, scarcely used, 15*s.*; Halse's medical battery, cost ten guineas, in use a few months; plates want attention, otherwise in excellent condition, must be sold. What offers? Roper, chemist, Dunmow.

A mahogany pill machine to cut 18 pills, n ar new, 12*s.*, delivered free to Londo ; 12 Pond's extract, 8*s.*; *Chemist and Drug* 1865 to 1877; *Pharmaceutical Journal*, 1 to 1870; offers wanted. Griffith, Corn , Bridgwater.

Seventeen doz. 22-oz. castor-oil bottles; 40 12-oz. ditto; job lot pomade bottles; M cattle spice; Creta precip. and pulv. al Cape; job lot of glass retorts, beakers, & any reasonable price. Newham & C Sheffield.

The "Triplexicon" magic-lantern for sale, i minating power 110 candles, price 4*l.* 4 , a marvellous light; also a large quantity slides and effects, the Paris Exhibitio Cyprus, comics, hymns, &c., cheap. Apply, W. H., 151 Hoxton Street, N., London.

Quantity Field's candles and carriage-ligh , five petroleum tanks, 1 cwt. lichen hybern, 3 cwt. gum acac., 4 W. quarts spts. ammon. f 1 cwt. lac sulph., 28 lbs. gallæ cærul., 3 doz. Rumsey's plate powder. Harrison, 87 O d Chester Road, Birkenhead.

Minor Students.—50 questions asked of a successful candidate at last Minor, 2*s.*; 30 prescriptions given to dispense at the Minor, 2*s.*; 50 illegible prescriptions, 2*s.* 6*d.*; mounted indigenous plants, 5*s.* "Chemist," care of Mr. Edwards, London House, Petham, Canterbury.

To Chemists and Dentists.—For disposal, very low, a glass tablet, size 31½ inches by 8¾ inches, "Dentist" on gold letters, chocolate ground; also first-class vulcanite and metal specimens. For particulars and price, address, Dens, care of Messrs. Wright, Layman & Umney, 50 Southwark Street, London.

A Bargain.—A complete set of efficient oxy-hydrogen dissolving apparatus, suitable f brilliant public exhibitions; nearly new; cost over 30*l.*, will take 20*l.* Further particulars given on receipt of stamped envelop . Address, B. Waddington, Thornton, near Bradford, Yorkshire.

Henry's "First Latin Book," 1*s.* 6*d.*; Rudiman's "Latin Rudiments," 6*d.*; "Cæsaris de B Gallico," by H. Young, 1*s.* 3*d.*; Gle s "English Grammar," 4*d.*; Davis's "Arithmetical Examples," 4*d.*; Goodwin's "English Latin Dictionary," in o e volume, 2*s.* H. Gilby, Long Sutton, Lincolnshire.

Nests of drawers, window enclosures, glaz d cases, shop jars all sizes and colours, show bottles, specie jars, store bottles, pill machines, and every requisite; also medical books, surgical instruments, tobacconis ' show-cases, jars, &c., cheap to clear out. Handsome vase satin flowers, 2*l.*; sewin machine, 2*l.* 294 Old Kent Road.

ge quantity of fine wax, good colour, price s. 2*d.* per lb., sample free ; also a smaller uantity of honey, at 8½*d.* per lb. Herbert emp, High Street, Horncastle.

70-gal. oil tanks ; 1 soda-water stand, fig. 62 law's list ; 3 large window carboys ; 2 small itto ; 2 cwt. imperial yellow ; several other rticles cheap, or exchange drugs or patents. ockburn, Chemist, Sunderland.

sale.—Two specie jars, four pear-shaped how bottles, mahogany stands, quantity of hop, stoppered rounds, wide and narrow nouth, black stock-bottles labelled, also l-lb. jars, ½-lb. extract jars, set brass scales, n mahogany box, with drawer ; tincture ress, pill machine, and drum sieve. Edward loore, Cheltenham.

h-brush case, fig. 52, Maw's catalogue, 30*s.*, ood as new ; copper still, about 2 gals., 20*s.* ; tand, labelled. "Choice Essences," similar to faw's fig. 69, 6 holes, no bottles, 20*s.* ; mahogany and plate-glass counter-case, Maw's fig. 3, 6*l.*, slight crack in front plate, otherwise good as new ; Spong's patent dvertising lamp, 15*s.* ; Ferguson, 53 Great George Street, Leeds.

p ointment machine, by Gibson, Stamford ; pair 24-inch stones in frame, and driving gear ; ¾-horse-power upright steam engine ; 15 vols. *Pharmaceutical Journal* ; large soda-water carbonator (Wenham Ice Company) ; coffee mill ; land-surveying chain and pins ; 8-inch iron mortar ; coloured illumination lamps with wicks ; 6-cell Smee's battery, with rackwork in mahogany case. Cheap. Rainey, Chemist, Spilsby, Lincolnshire.

ndard works, in good condition :—Erichsen's "Surgery," 1,150 pages, 450 engravings (marked 28*s.*), 12*s.* 6*d.* ; Smellie's "Midwifery," very scarce, 2 vols., 40 full-page copper-plates, 12*s.* 6*d.* ; Clarke's "Diseases of Women and Children," 3 vols. (published 46*s.*), 15*s.* ; Bentley's "Botany," 1,000 engravings, 6*s.* ; Wilson's "Anatomy," 200 plates, soiled (other books clean), 4*s.* ; Churchill's "Midwifery," 105 plates, unused, 5*s.* ; Churchill's "Diseases of Children," 800 pages, 6*s.* ; Fownes' "Chemistry," 5th edition, 4*s.* ; "Reproductive Organs" (Acton), 6*s.* Turner, Chemist, Totterdown, Bristol.

ock taking.—W. F. vials, 1 and 2-dr. 3*s.*, ½-oz. 3*s.* 6*d.*, 1-oz. 3*s.* 9*d.*, 1½-oz. 4*s.* 6*d.*, 2-oz. 5*s.* ; W. F. square essence, 1-oz. 5*s.* ; octagon blue chlorodyne, ½-oz. 3*s.* 9*d.*, 1-oz. 4*s.* 6*d.* ; W. F. pomades, box-wood tops, 2-oz. 15*s.*, 3-oz. 18*s.*, 4-oz. 19*s.* ; green pomades, varnished wood caps, 2-oz. 11*s.* 6*d.*, 3-oz. 14*s.*, 4-oz. 16*s.* ; W. F. round shoulder lime and glycerine, 3-oz. 8*s.*, 4-oz. 9*s.*, 6-oz. 11*s.* ; 1*d.* burst-off bottles, green, ¾-oz., round oils, ¾-oz. square, square green, octagon ink, square polish, &c., all 2*s.* 3*d.* per gross ; green burst-off vials, ½-oz. 2*s.* 6*d.*, 1-oz. 2*s.* 9*d.*, 1½-oz. 3*s.* 6*d.*, 2-oz. 4*s.* ; 6*d.* straight green feeders, plain, 10*s.* gross ; 6*d.* fitted feeders, 26*s.* Chemist, 15 Huntingdon Street, London, N.

lendid mahogany upright counter show-case, 3 feet by 2 ft. 8 in. by 9, 40*s.* ; 10 ½-gallon store bottles, gold labels, 6*s.* 8*d.* ; handsome gold-labelled specie jar, 26 inches, cost 75*s.*, 37*s.* 6*d.* ; 1 doz. 2-lb. gold label troch bottles, 11*s.* ; printing press with type drawer, prints 9½ by 6½, 4*s.* ; ditto American (patent) iron, prints 5 by 4, 20*s.* ; stamp for sample work ; paper stand, 2*s.* ; 4 pear carboys, 2 gallons, 8*s.* ; 2 pear carboys, 1 gallon, for 3*s.* ; 4 carboy stands, 3*s.* ; 1 dozen 30-oz. N M gold label bottles, 9*s.* ; 1 dozen 16-oz. W M paper label, 8*s.* ; 1 doz. 20-oz. N M gold label, 5*s.* ; morocco dressing and writing case with instrument rack, &c., 5*s.* ; tooth forceps taken in exchange. Adams, 20 Oxford Street, Salford.

Pharmaceutical Journal from January '69 to December '78 ; also *Chemist and Druggist* from June '73 to December '78, complete, unbound, half price. Griffith, Chemist, Bangor.

A 12-ft. nest of fittings, as Maw's fig. 196, 18*l.*, glass knobs, &c., &c. ; a 5-ft. 6-in. elaborate dispensing screen, glass case at each side, with looking-glass in centre and marble slab in front, 8*l.* 10*s.* ; a 10-ft. 6-in. mahogany-top counter, as fig. 149, deal front, 90*s.* ; a 9-ft. mahogany-top counter, deal panelled front, fitted with drawers the entire length, till, &c., &c., 90*s.* ; a bent plate-glass counter case, 3 ft. long, 60*s.* ; a do. do., 3 ft. 6 in., 65*s.* ; a 4-ft. do. do., 75*s.* ; a 5-ft. do. do., 95*s.* ; a 5-ft., as 105, 5*l.* ; a 6-ft., as 105, 7*l.* ; a 5-ft. 6-in., as fig. 99, 6*l.* 10*s.* ; a 5-ft. 9-in., as fig. 96, 5*l.* ; a 3-ft. 10-in., as fig. 101, 4*l.* ; a 4-ft. do. do., 85*s.* ; a 3-ft. 6 in., as fig. 100, 75*s.* ; a 2-ft. 6-in. and 2-ft. 9-in., as fig. 16, 40*s.* each ; a plate-glass dispensing screen, as 164, with tablet equal to new, 7*l.* E. Natali, 213 Old Street, E.C.

A quantity of labelled drawers, in good condition, 1*s.* 3*d.* per drawer ; several pill machines, new, 2-grain, 3-grain, 4-grain, and 5-grain, to cut 24, 16*s.* 6*d.* each ; a quantity of new ointment jars, 25 per cent. off list price ; 2 pair specie jars, Royal arms, 24 in. high, 80*s.* pair ; several others from 50*s.* pair ; 2 12-gall. ; wall cases, 6 ft., 5*l.* ; 4 ft., 50*s.* ; 4 ft. do. do. 45*s.* ; 7 ft. as fig. 200, 12*l.* ; Sponge case, fig. 92, 5*l.* ; desk and case, fig. 21, 65*s.* ; fig. 39, 50*s.* ; 7 ft. dispensing screen, glass case at each end, with looking-glass centre, with marble slab in front, handsome tablets on top, silvered plate-glass back to cases, 8*l.* 10*s.* ; 6 ft., as 163, 6*l.* 10*s.* ; 30 doz. shop rounds, at 8*s.* 6*d.* doz. ; 3 ft. best plate-glass counter case, fig. 100, 70*s.* ; 4 ft., fig. 101, 90*s.* ; 4 ft., as 41, 80*s.* ; 8 ft. as 98, 8*l.* ; 6 ft. as 99, 7*l.* ; 6 ft. as 105, 6*l.* 10*s.* ; 500, equal to new, mahogany drawers, labelled and glass knobs, 2*s.* 6*d.* each, in nests from 2 ft. to 12 ft. long. E. Natali, 213 Old Street, London, E.C.

3 ft. long, 4 ft. long, 6 ft. long, 5 ft. 2 in. long, 6 ft. 9 in. long, 10 ft. long, 12 ft. long, 14 ft. long, 16 ft. long nests mahogany-fronted, gold-labelled shop drawers, with lockers under shelving, and cornice above ; 5 ft. long, 6 ft. long, 10 ft. long, 15 ft. long, 16 ft. long nests deal stained mahogany, French polished gold-labelled shop drawers, with lockers under shelving and cornice above ; 10 mahogany-top counters, all sizes ; 4 superior mahogany window enclosures ; 9 mahogany wall cases, with and without cupboards under ; 6 mahogany upright dispensing case screens ; 2 mahogany upright cases with desks ; 2 mahogany desks with ground glass screens ; 15 mahogany bent and flat counter cases ; tooth-brush case, as 72 Maw's ; 200 French lozenge jars, all sizes, as fig. A Maw's ; 120 jujube jars, all sizes, as fig. 2 Maw's ; quantity window carboys and specie jars ; handsome show jars and vases, as figs. D and C Maw's ; 1,800 blue and olive shop drawers, as fig. 1 Maw's, all sizes ; scales and weights, as figs. 1, 2, 5, and 6 Maw's ; 3 1-qrt. and 1 ½-gall. tincture presses ; 4 pill machines ; quantity gold-labelled shop bottles, all sizes ; and every description of utensils and fixtures required by the trade. Lloyd Rayner, 333 Kingsland Road, London, N.

FORMULÆ.

Fragrant Liquid Dentifrice, an elegant preparation for the teeth, superior to powders and pastes ; will command a ready sale wherever introduced ; price 5*s.* 31/208.

A first-class recipe to make cattle food ; price 10*s.* ; none better made. Sheel, Chemist, Low Fell, Gateshead-on-Tyne.

Rose Dentrifice, much admired, half profit, the original recipe for 2*s.* 6*d.* Minor, 4 Harlowe Street, Folkestone.

Gonorrhœa mixture, a most valuable remedy ; never fails ; the recipe for 2*s.* 6*d.* Excelsior, 4 Harbour Street, Folkestone.

Rose Glycerine Jelly, perfectly transparent, delightful to use, makes the skin beautifully soft ; an extensive sale will follow its introduction ; price 5*s.* 208/31.

Furniture paste, very superior, cleans and puts a brilliant gloss on polished or other furniture, &c., 2*s.* 6*d.* ; baking powder (original), worth 10*s.*, 2*s.* 6*d.* The excellence of these preparations secures for them a good sale. Reference or sample post free. H. Hare, 81 South Street, Goole.

WANTED.

Toothbrush case, leech aquarium. 14/210.

Frames to make court plaster on. 22/210.

Harris's "Dental Surgery." Price to Kendal, Blyth.

Two show jars 33 inches high. Atkinson, Chemist, Lincoln.

A chemist's lamp, small ; state size, condition, and price. Cross, Chemist, Reading.

Furniture cream bottles, 3-oz., 5-oz., or 10-oz. ; state price. Spink, Chemist, Pontefract.

Phœnix sign ; window fountain ; plate : "Chemist Druggist," crystal under shade. 31/209.

Recipe for a first-class black writing-ink, to flow easily, and dry a deep black quickly. 10/209.

"British Pharmacopæia," good condition ; small show-case for surgical instruments, to screw on to wall ; cheap. McIver, Dingwall.

A new or secondhand portable dipping apparatus, large enough to dip full-sized sheep. W. Kemp, Chemist, Horncastle.

Squire's "Companion to the British Pharmacopœia," eleventh edition, 1877. Price and particulars to J. Partridge, 75 High Street, Barnstaple.

Largest size composition mortar, 3-grain pill machine, Redwood's Grey's Supplement, nest of drawers for warehouse, fireproof safe. Perks, Sloane Square, London.

Second-hand Southall's Materia Medica Cabinet ; will give 15*s.* ; in good condition. E. C., Mr. Keeley's, Chemist, 214 Devon Road, Bromley-by-Bow.

Four show globes, 6 gallons each, with stands ; four specie jars, 24 inches high, and stands ; four mahogany shop chairs ; all cheap and good. Sharp, Chemist, Sunderland,

"British Pharmacopœia," 1874 ; Tome's "Dental Surgery" ; Tome's "Anatomy" ; state lowest price. Mackay, 16 Ampton Street, London, W.C.

Chemist and Druggist for April, May, November, December, 1868 ; April 1869. *Pharmaceutical Journal* for July 2, 1870 ; July 1, 1871 ; June 29, 1872 ; ½-gall. labelled black bottles and jujube jars, Maw's fig. 1 ; lowest price, &c. Griffin, Pigott Street, Birmingham.

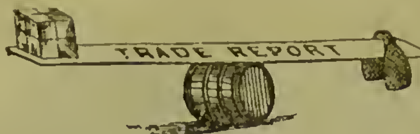
ADDRESS WANTED.

Mrs. Higgs, tall, wears spectacles. 28/207.

James Murray, Esq., son of Sir John Murray. 207/28.

The present address of either of the partners of the late firm of Yarrow & Adkins, Sundriesmen. Smith, Chemist, Rye.

The address of F. G. Ratcliffe, Dentist, late Leeds. Has only one leg ; uses one crutch Jones, Apothecaries' Hall, Bangor.



THE depression in trade has never been more marked than it has been at the present time. There are not wanting prophets who consider the most serious strain is only now beginning. The collapse of a bank at Glasgow has already brought to the ground several great firms, and there is no telling how far the disturbance may extend. We are brought face to face with the fact, which is always well known, but only recognised at moments like these, that a mass of a vast commerce is purely fictitious, to describe it as mildly as possible. Manufacturers make goods; these are passed through merchants, and by the latter consigned to importers abroad, and ultimately put on a market where nobody wants them. Meanwhile various pieces of paper have been passing about, banks have been busy, reports have been issued and dividends declared, and, what is most marvellous, the various parties interested have kept each other up, by means of mutual support and mutual suspicion, until the fatal hour arrives when one totters; then the whole group fall one after the other, and the ultimate result is that persons who have had nothing whatever to do with the process, the outside creditors in fact, have to lose the hard cash and pay the whole of the money which has been so cleverly handled and "financed," and which has kept the whole scheme going for months and perhaps for years. Who can tell how much of what we term our export trade is of this false character? Add to the displacement and inconvenience thus occasioned the gradually growing effect of a long period of depression, low prices and scanty profits on the legitimate trade of the country, and we can judge how likely we are to be approaching a crisis of extreme severity.

A further decrease took place last month in the declared value of our national exports, when they amounted to 16,561,382*l.*, whereas in the corresponding month last year they aggregated 17,117,426*l.* During the first nine months of the present year the declared value was 2,759,342*l.* less than in the same period last year, and 6,109,270*l.* less than in 1876, as shown by the following totals:—Nine months ended September, 1878, 144,926,177*l.*; 1877, 147,685,519*l.*; 1876, 151,035,447*l.*

Alkali has suffered a still further reduction in value, soda crystals having receded to 3*l.* 7*s.* 6*d.*, being 10*s.* cheaper than they were sold at a year ago. Bleaching powder is a trifle easier, sales being made at 5*s.* 9*d.*; cream of tartar has been very dull, and has declined to 103*s.*; tartaric acid is quiet, with only a fractional decline; citric has fallen from 2*s.* 4½*d.* to 2*s.* 2*d.*; oxalic has been scarcer, and price seems firmer; carbonate or ammonia firm at 6½*d.* to 6¾*d.*, according to package; arsenic a trifle stronger; refined borax still scarce and firm; arsenic steady and a trifle dearer.

Rumours of a probable advance in iodine have not yet been realised, but some quantity was bought on speculation.

Quinine has been lowered for English make, and the leading foreign brand now holds the highest quotations.

The drug markets reflect the general depression. There is no more doing than actual requirements make necessary.

The crop of opium is now reported to be a fair one. The repeated attempts to run up the price will now, perhaps, cease for a few months; balsam copaiba still continues remarkably low. Some Canada balsam was brought on the market and realised 8*d.* and 8½*d.*; musk has declined in value, and otto is not much wanted; camphor keeps high, and refiners' price, 1*s.* 4½*d.*, is more likely to advance than recede; almonds are still very dear, but essential oil has slightly fallen; castor oil is coming in larger quantities and a trifle lower; essence of lemon, it is said, will be dearer in consequence of injury to the trees; senna selling freely at rather better prices, the supply being short; ambergris realised 65*s.*; five cases amorphous phosphorus, put up without reserve, sold at 2*s.* 10*d.* At the last bark sales on the 8th, South American kinds went off slowly, and only a small portion of the total quantity offered found buyers at a further decline; calisaya sold at 2*s.* 10*d.* to 4*s.* 9*d.*; common, 1*s.*; Columbian and New Granada, 2*s.* 10*d.* to 3*s.* 10*d.*; and Carthagena, 2*s.* 3*d.* to 2*s.* 4*d.* East India bark wa, however, in good demand, and all that was offered was taken at slightly improved rates, the best crown mossy making from 5*s.* 3*d.* to 5*s.* 10*d.*

OILS.—Linseed has fluctuated but slightly, and leaves of dull. Rape is dearer, English refined selling at 31*l.* Cotto oil lower, and cod also slightly easier. No transactions i olive, but a tendency towards lower prices. Turpentine about the same as last month, and scarcely any variation for forward quotations. Petroleum has continued to fall, an now stands at its lowest, being 7½*d.* for spot, while transactions have taken place for December at 8*d.*, and for the fir four months of 1879 at 8¼*d.*

Heavy arrivals of East Indian linseed, and some re-sal of stock have caused depression in this market. Calcutta has sold at as low as 48*s.* 6*d.* ex ship, but there has since been a rally, and now there are buyers at 50*s.* and 50*s.* 6*d.* for future deliveries.

Cochineal sales were held on the 9th, when Teneriff chiefly was offered. The demand was very limited. 450 bags out of 820 put up were sold at a decline of ½*d.* 1*d.* for black, and ½*d.* for silver, the former varying fro 2*s.* 1*d.* to 2*s.* 7*d.*, the latter from 2*s.* 2*d.* to 2*s.* 4*d.*

Shellac has been brought forward freely, but buyers hav not been inclined to keep up their purchases, and a furth decline of about 2*s.* and 3*s.*, according to quality, has be submitted to.

	Sept. 30 Stocks		Sept. 30 Imports		Sept. 30 Deliveries	
	1878	1877	1878	1877	1878	1877
Aloes ....cs	1,674	1,852	2 017	1,418	2,384	1,93
,, ...kegs	12	20	1	—	3	5
,, ...gourds	730	2,883	176	2,891	1,755	1,667
Aniseed, Star ......chts	949	1,216	758	263	760	777
Arrowroot ....cks	16,9 3	15,210	13,862	14,725	10,269	9,321
,, ...bxs & tins	7,843	7,165	7,874	8,303	6,605	5,322
Balsam ....cks, &c.	119	389	174	465	243	432
Bark, Medicinal ..cks, &c.	882	1,085	1,808	2,924	2,095	1,989
,, ...srns, &c.	10,695	11,664	33,016	20,961	33,117	17,973
Borax ....pkgs	1,638	1,060	862	429	257	770
Bees' Wax......bls & srns	446	531	377	274	485	157
,, ...cks & cs	1,535	1,258	1,495	1,819	1,331	1,531
,, ...cakes	304	51	457	138	161	206
Wax Japan vegetable pkgs	4,950	7,575	791	5,242	2,155	5,199
Camphor............pkgs	1,580	6,719	4,244	5,194	7,169	4,882
Cardamoms..........chts	322	716	288	485	537	60
Cocculus Indicus bgs, &c.	1,839	2,504	127	539	724	424
Colombo root........pkgs	548	885	142	375	211	[illegible]
Cream of Tartar ......cks	83	89	2 8	205	255	[illegible]
Cubebs ....bgs	184	275	30	49	140	54
Dragonsblood........chts	107	137	119	196	150	119
Galls, E.I. ......cks & cs	7,987	4,850	9,167	7,218	4,422	3,899
Mediterranean ......sks	1,053	640	1,544	1,088	1,105	905
Gum—						
Ammoniac ....pkgs	519	506	102	184	68	166
Animi & Copal .... ,,	7,341	8,489	4,122	9,393	4,921	5,725
Arabic, Barbary .... ,,	1,115	759	1,597	1,821	1,504	2,065
Turkey .... ,,	398	359	1,033	1,005	1,101	[illegible]
E.I.............. ,,	2,069	2,032	4,077	2,560	4,150	2,144
Assafœtida .... ,,	321	412	286	467	267	377
Benjamin .... ,,	983	1,193	1,255	1,611	1,236	1,015
Damar .... ,,	1,617	1,103	2,562	1,134	2,038	2,484
Galbanum.......... ,,	23	37	—	15	12	10
Gamboge .... ,,	172	152	297	200	291	[illegible]
Guaiacum .... ,,	27	23	134	159	143	125
Kino .... ,,	13	18	10	5	9	7
Kowrie ....tns	712	1,058	955	1,423	1,241	1,174
Mastic ....pkgs	174	113	95	26	45	25
Myrrh, E.I. .... ,,	285	289	199	388	1,9	354
Olibanum .... ,,	1,728	4,391	6,505	7,934	7,731	5,082
Sandarac .... ,,	999	254	1,710	970	1,189	1,232
Senegal ....tns	20	13	14	2	4	7
Tragacanth ......pkgs	955	209	2,095	714	1,337	576
Ipecacuanha....cks & bgs	314	184	603	341	601	320
Jalap ....bls	419	575	128	262	246	357
Nux Vomica ....pkgs	4,887	1,516	6,161	1,559	2,534	1,554
Oil—						
Castor ....cks	—	—	—	4	7	4
,, ...cs	3,899	6,164	13,519	14,239	13,157	13,52
Palm ....tns	958	193	1,682	1,634	1,331	1,948
Cocoanut .... ,,	905	2,983	3,601	8,140	5,564	8,004
Olive ....cks, &c.	584	1,910	2,266	5,338	3,001	3,844
Aniseed ....cs	123	333	461	475	556	351
Cassia .... ,,	577	712	7	553	148	233
Opium ....chts, &c.	1,054	1,117	—	—	—	—
Rhubarb ....chts	1,271	1,029	1,534	1,308	1,281	1,227
Sarsaparilla ....bls	900	1,252	1,547	2,097	1,872	1,869
Senna ....bls, &c.	1,667	3,431	829	3,819	2 402	2,919
Shellac............cs, &c.	44,296	36,984	30,380	34,446	25,756	24,[illegible]61
Terra Japnca, Gambier tns	2,776	1,950	11,264	6,505	10,274	3,433
Cutch .... ,,	3,556	2,527	3,462	2,028	2,258	2,719
Turmeric .... ,,	854	866	2,131	1,650	2,457	1,417

Monthly Price Current.

prices quoted in the following list are those actually obtained in Mincing Lane for articles sold in bulk. Our Retail Subscribers must not expect to purchase at these market prices, but they may draw from them useful conclusions respecting the prices at which articles are offered by the Wholesale Firms.

HEMICALS.

	1878. s. d.		s. d.	1877. s. d.		s. d.
ACIDS—						
Acetic ....per lb.	0 2¾	to	0 0	0 2¾	to	0 0
Citric .... ,,	2 2	..	0 0	2 4	..	2 6
Hydrochlor......per cwt.	5 0	..	7 0	4 0	..	7 0
Nitric ....per lb.	0 4¼	..	0 0	0 4¾	..	0 0
Oxalic .... ,,	0 4¼	..	0 4¾	0 5	..	0 0
Sulphuric ...... ,,	0 0¾	..	0 1	0 0¾	..	0 1
Tartaric crystal.. ,,	1 5	..	1 5¼	1 5	..	0 0
powdered ,,	1 5½	..	0 0	1 5	..	0 0
ANTIMONY ore ......per ton	240 0	..	300 0	240 0	..	300 0
crude .. per cwt.	32 6	..	0 0	37 0	..	0 0
star...... ,,	50 0	..	51 0	48 0	..	0 0
ARSENIC, lump...... ,,	25 0	..	0 0	26 6	..	0 0
powder.... ,,	8 6	..	9 0	8 3	..	0 0
BRIMSTONE, rough ...per ton	110 0	..	115 0	105 0	..	110 0
roll .. per cwt.	9 6	..	10 3	9 6	..	10 6
flour.... ,,	11 6	..	13 6	11 6	..	13 6
IODINE, dry ....per oz.	1 0	..	0 0	0 9¼	..	0 0
IVORY BLACK, dry .. per cwt.	8 6	..	0 0	8 6	..	0 0
MAGNESIA, calcined..per lb.	1 10	..	0 0	1 10	..	0 0
MERCURY ....per bottle	137 6	..	0 0	145 0	..	0 0
MINIUM, red ...... per cwt.	18 3	..	18 6	22 3	..	0 0
orange .. ,,	29 6	..	0 0	33 0	..	0 0
PRECIPITATE, red . per lb.	3 5	..	0 0	3 7	..	0 0
white ,,	3 4	..	0 0	3 6	..	0 0
PRUSSIAN BLUE .. ,,	0 0	..	0 0	0 0	..	0 0
SALTS—						
Alum ....per ton	125 0	..	0 0	142 6	..	117 6
powder...... ,,	142 6	..	0 0	155 0	..	157 6
Ammonia :						
Carbonate ...... per lb.	0 6½	..	0 6¾	0 5½	..	0 5¾
Hydrochlorate, crude, white .... per ton	600 0	..	720 0	560 0	..	720 0
British (*see* Sal Am.)						
Sulphate........ per ton	385 0	..	405 0	420 0	..	435 0
Argol, Cape ......per cwt.	75 0	..	82 0	75 0	..	87 6
Red........ ,,	52 0	..	70 0	67 0	..	73 0
Oporto, red. ,,	32 6	..	32 0	32 6	..	33 0
Sicily .. ,, ,,	60 0	..	65 0	60 0	..	65 0
Ashes (*see* Potash and Soda)						
Bleaching powd...per cwt.	5 9	..	6 0	6 0	..	6 3
Borax, crude...... ,,	27 0	..	30 0	27 0	..	38 0
British refnd. ,,	35 0	..	36 0	40 0	..	0 0
Calomel ....per lb.	3 0	..	0 0	3 2	..	0 0
Copper :						
Sulphate ....per cwt.	18 3	..	18 6	20 0	..	20 6
Copperas, green..per ton	50 0	..	55 0	55 0	..	60 0
Corrosive Sublimate p. lb.	2 5	..	0 0	2 7	..	0 0
Cr. Tartar, French, p. cwt.	102 0	..	103 0	100 0	..	0 0
brown ,,	80 0	..	0 0	90 0	..	0 0
Epsom Salts ....per cwt.	4 3	..	6 0	4 3	..	6 0
Glauber Salts .... ,,	3 0	..	4 6	3 0	..	4 6
Lime :						
Acetate, white, per cwt.	11 0	..	20 0	11 0	..	20 0
Magnesia : Carbonate ,,	47 6	..	0 0	47 6	..	0 0
Potash :						
Bichromate ....per lb.	0 4¾	..	0 5	0 3¾	..	0 4
Carbonate :						
Potashes, Canada, 1st sort ......per cwt.	22 6	..	23 0	24 0	..	0 0
Pearlashes, Canada, 1st sort ......per cwt.	32 6	..	33 0	33 0	..	0 0
Chlorate ......per lb.	0 6⅞	..	0 7	0 8⅛	..	0 8¼
Prussiate .... ,,	0 11	..	0 11½	0 10½	..	0 11
red.... ,,	1 7½	..	1 8	0 0	..	0 0
Tartrate (*see* Argol and Cream of Tartar)						
Potassium :						
Bromide	2 6	..	0 0	0 0	..	0 0
Chloride......per cwt.	6 6	..	0 0	0 0	..	0 0
Iodide ....per lb.	15 0	..	0 0	11 9	..	0 0
Quinine :						
Sulphate, British, in bottles ......per oz.	11 0	..	11 3	12 0	..	0 0
Sulphate, French ,,	12 0	..	0 0	11 3	..	0 0
Sal Acetos ......per lb.	0 6½	..	0 7	0 7	..	0 7¼
Sal Ammoniac, Brit. cwt.	44 0	..	45 0	44 0	..	45 0
Saltpetre :						
Bengal, 6 per cent. or under ......per cwt.	19 6	..	20 0	22 0	..	22 6
Bengal, over 6 per cent. per cwt.	18 6	..	19 3	20 6	..	21 6
British. refined ,,	24 0	..	25 0	25 0	..	27 0
Soda: Bicarbonate, p. cwt.	9 9	..	10 0	10 6	..	10 9
Carbonate :						
Soda Ash ..per deg.	0 1½	..	0 0	0 1¾	..	0 0
Soda Crystals per ton	67 0	..	70 0	77 6	..	0 0
Hyposulphite, per cwt.	0 0	..	0 0	0 0	..	0 0
Nitrate ...... ,,	14 6	..	14 9	14 6	..	15 0
SUGAR OF LEAD, White cwt.	38 0	..	0 0	37 6	..	38 0
Brown, cwt.	26 6	..	0 0	26 6	..	0 0
SULPHUR (*see* Brimstone)						

	1878. s. d.		s. d.	1877. s. d.		s. d.
VERDIGRIS .... per lb.	1 1	to	1 5	1 1	to	1 5
VERMILION, English ,,	2 8	..	0 0	2 10	..	0 0
China ,,	2 6	..	0 0	0 0	..	0 0
DRUGS.						
ALOES, Hepatic ....per cwt.	80 0	..	160 0	70 0	..	180 0
Socotrine .. ,,	90 0	..	200 0	85 0	..	220 0
Cape, good.. ,,	48 0	..	50 0	53 0	..	54 0
Inferior .... ,,	42 6	..	48 0	44 0	..	52 6
Barbadoes .. ,,	65 0	..	145 0	40 0	..	200 0
AMBERGRIS, grey........oz.	0 0	..	0 0	74 6	..	82 0
BALSAM—						
Canada............per lb.	0 8	..	0 0	1 1	..	0 0
Capivi .... ,,	1 3½	..	1 5	1 5	..	1 6
Peru .... ,,	0 0	..	0 0	5 0	..	0 0
Tolu .... ,,	3 0	..	3 6	6 0	..	6 6
BARKS—						
Canella alba......per cwt.	18 0	..	19 0	21 0	..	28 6
Cascarilla .... ,,	17 0	..	23 0	15 0	..	20 0
Peru, crown & grey per lb.	1 2	..	2 8	1 6	..	2 8
Calisaya, flat ,,	2 4	..	4 6	1 3	..	6 6
,, quill ,,	4 0	..	7 0	2 0	..	7 0
Carthagena ,,	2 8	..	4 1	1 6	..	2 7
Columbian .. ,,	2 0	..	6 0	1 9	..	6 2
E. I. .... ,,	1 6	..	3 6	1 3	..	4 6
,, good & fine ,,	4 0	..	8 0	5 0	..	6 6
Pitayo ...... ,,	1 0	..	2 10	0 6	..	1 6
Red .... ,,	3 0	..	8 0	2 3	..	5 0
Buchu Leaves........ ,,	0 2½	..	1 3	0 2½	..	1 6
CAMPHOR, China ..per cwt.	100 0	..	87 6	92 6	..	95 0
Japan .. ,,	100 0	..	92 6	9[illegible] 6	..	0 0
Refin. Eng. per lb.	1 4½	..	0 0	1 2½	..	1 3
CANTHARIDES........ ,,	1 8	..	4 0	1 11	..	5 3
CHAMOMILE FLOWERS p. cwt.	60 0	..	80 0	50 0	..	200 0
CASTOREUM ....per lb.	0 0	..	0 0	9 0	..	30 0
DRAGON'S BLOOD, lp. p. cwt.	80 0	..	200 0	95 0	..	260 0
FRUITS AND SEEDS (*see also* Seeds *and* Spices).						
Anise, China Star per cwt.	73 0	..	90 0	90 0	..	100 0
Spanish, &c. ,,	23 0	..	35 0	30 0	..	35 0
Beans, Tonquin....per lb.	3 3	..	5 4	1 9	..	2 7
Cardamoms, Malabar good .... ,,	6 0	..	6 6	5 0	..	5 11
inferior.... ,,	2 0	..	5 10	1 6	..	4 5
Aleppy .... ,,	2 0	..	6 8	3 2	..	5 0
Madras.... ,,	2 8	..	4 6	2 2	..	3 6
Ceylon .... ,,	3 0	..	4 3	3 6	..	5 0
Cassia Fistula....per cwt.	0 0	..	0 0	10 0	..	32 0
Castor Seeds .... ,,	0 0	..	0 0	0 1	..	0 2½
Cocculus Indicus ,,	9 0	..	10 0	8 3	..	11 0
Colocynth, apple ..per lb.	1 0	..	1 9	0 0	..	0 0
Croton Seeds ....per cwt.	31 6	..	33 0	30 0	..	0 0
Cubebs.......... ,,	0 0	..	0 0	27 0	..	27 6
Cummin .... ,,	35 0	..	45 0	10 0	..	20 0
Dividivi .... ,,	10 3	..	16 0	12 6	..	17 6
Fenugreek ...... ,,	0 0	..	0 0	8 0	..	11 0
Guinea Grains .. ,,	28 6	..	30 0	28 6	..	0 0
Juniper Berries ,,	3 3	..	6 0	8 0	..	10 0
Nux Vomica.. .. ,,	9 0	..	11 6	12 0	..	14 6
Tamarinds, East India,,	12 0	..	19 0	11 0	..	18 0
West India ,,	21 0	..	25 0	20 0	..	25 0
Vanilla, large .... per lb.	16 0	..	20 0	20 0	..	28 0
inferior ,,	12 0	..	15 6	12 0	..	18 0
GINGER, Preserved, per lb.	0 5¼	..	0 6	0 4½	..	0 7
HONEY, Chili .... per cwt.	30 0	..	40 0	32 0	..	41 0
Jamaica ,,	32 0	..	43 0	40 0	..	46 0
Australian ,,	0 0	..	0 0	0 0	..	0 0
IPECACUANHA .... per lb.	4 3	..	4 9	5 0	..	6 8
ISINGLASS, Brazil.. ,,	2 6	..	5 4	2 10	..	4 11
Tongue sort ,,	3 6	..	5 8	3 6	..	5 7
East India ,,	1 4	..	4 8	2 3	..	5 6
West India ,,	3 8	..	4 11	4 2	..	4 10
Russ. long staple	6 0	..	14 0	8 0	..	15 0
,, inferior	0 0	..	0 0	0 0	..	0 0
,, Simovia	1 6	..	3 0	2 0	..	3 0
JALAP, good...... ,,	0 10	..	0 11	0 8	..	0 10
infer. & stems ,,	0 7½	..	0 9¾	0 7	..	0 7½
LEMON JUICE .... per degree	0 0⅝	..	0 1¼	0 1¼	..	0 1½
LIME JUICE........per gall.	1 3	..	1 8	0 0	..	0 0
LIQUORICE, Spanish per cwt.	0 0	..	0 0	31 0	..	39 0
Liquorice Root ,,	0 0	..	0 0	0 0	..	0 0
MANNA, flaky ......per lb.	0 0	..	0 0	0 0	..	0 0
small ...... ,,	0 0	..	0 0	0 0	..	0 0
MUSK, Pod..........per oz.	10 0	..	55 0	13 6	..	48 6
Grain........ ,,	0 0	..	0 0	40 0	..	50 0
OILS (*see also separate list*)						
Almond, expressed per lb.	1 10	..	0 0	1 4	..	0 0
Castor, 1st pale.... ,,	0 5	..	0 5⅛	0 4½	..	0 5
second .... ,,	0 4¾	..	0 0	0 4¼	..	0 4⅜
Cod Liver ...... per gall.	2 9	..	5 0	3 11	..	6 6
Croton .... per oz.	0 2½	..	0 2¾	0 2½	..	0 2¼
Essential Oils :						
Almond ....per lb.	20 0	..	0 0	20 0	..	0 0
Anise-seed ...... ,,	7 0	..	7 1½	6 3	..	6 4
Bay ....per cwt.	0 0	..	0 0	65 0	..	70 0
Bergamot ...... per lb.	0 0	..	0 0	10 0	..	15 0
Cajeput......per bottle	0 0	..	0 0	3 0	..	3 6
Caraway........per lb.	0 0	..	0 0	9 0	..	9 3
Cassia .... ,,	2 9	..	0 0	3 2	..	0 0
Cinnamon ......per oz.	4 0	..	5 6	2 6	..	6 0
Cinnamon-leaf .. ,,	0 1¾	..	0 1⅝	0 2¼	..	0 3
Citronelle ...... ,,	0 2½	..	0 0	0 1¼	..	0 0
Clove .... ,,	8 3	..	0 0	8 6	..	0 0
Ginger Grass .. ,,	0 1½	..	0 2	0 2½	..	0 3
Lavender ......per lb.	0 0	..	0 0	1 8	..	7 0
Lemon .... ,,	4 0	..	8 0	7 0	..	9 6
Lemongrass ....per oz.	0 2½	..	0 0	0 2½	..	0 2⅝

	1878.					1877.				
Essential Oils, *continued*:—	s.	d.		s.	d.	s.	d.		s.	d.
Neroli … per oz.	3	0	to	6	6	3	0	to	6	6
Nutmeg … ,,	0	3	..	0	4	0	4¾	..	0	5
Orange … per lb.	5	0	..	7	0	6	0	..	9	0
Otto of Roses … per oz.	23	0	..	40	0	16	0	..	22	0
Patchouli … ,,	1	6	..	3	0	1	9	..	3	0
Peppermint:										
American … per lb.	10	0	..	12	0	13	0	..	14	3
English … ,,	24	0	..	25	0	34	0	..	35	0
Rosemary … ,,	2	0	..	2	6	2	0	..	2	6
Sassafras … ,,	1	9	..	2	0	2	3	..	2	6
Spearmint … ,,	0	0	..	0	0	12	0	..	15	0
Thyme … ,,	0	0	..	0	0	0	0	..	0	0
Mace, expressed .. per oz.	0	6	..	0	7	0	0	..	0	10
OPIUM, Turkey … per lb.	16	0	..	17	0	16	0	..	18	0
inferior … ,,	13	0	..	15	0	10	0	..	12	0
QUASSIA (bitter wood) per ton	100	0	..	130	0	100	0	..	130	0
RHUBARB, China, good and fine … per lb.	1	6	..	4	0	3	0	..	3	0
Mid. to ord. … ,,	0	9	..	1	4	0	10	..	2	6
Dutch Trimmed .. ,,	0	0	..	0	0	0	0	..	0	0
ROOTS—Calumba .. per cwt.	20	0	..	40	0	28	0	..	34	0
China … ,,	0	0	..	0	0	30	0	..	32	0
Chiretta … per lb.	0	0	..	0	0	0	0	..	0	0
Galangal … per cwt.	23	0	..	25	6	24	0	..	26	0
Gentian … ,,	18	0	..	20	0	22	0	..	24	0
Hellebore … ,,	0	0	..	0	0	0	0	..	0	0
Orris … ,,	0	0	..	0	0	26	0	..	75	0
Pellitory … ,,	0	0	..	0	0	70	0	..	76	0
Pink … per lb.	0	0	..	0	0	0	0	..	0	0
Rhatany … ,,	0	2	..	0	5	0	3	..	1	0
Seneka … ,,	2	4	..	2	6	3	6	..	4	0
Snake … ,,	0	10	..	1	0	0	6	..	0	6½
SAFFRON, Spanish .. ,,	20	0	..	40	0	20	0	..	34	0
SALEP … per cwt.	240	0	..	300	0	0	0	..	0	0
SARSAPARILLA, Lima per lb.	0	5	..	0	6	0	5	..	0	7
Guayaquil … ,,	0	0	..	0	0	1	10	..	2	2
Honduras … ,,	1	0	..	1	4	0	11	..	1	4
Jamaica … ,,	1	4	..	1	8	1	3	..	2	9
SASSAFRAS … per cwt.	9	0	..	11	0	9	0	..	11	0
SCAMMONY, Virgin .. per lb.	0	0	..	0	0	24	0	..	30	0
second & ordinary ,,	0	0	..	0	0	6	0	..	22	0
SENNA, Bombay … ,,	0	0	..	0	0	0	1	..	0	4
Tinnivelly … ,,	0	1½	..	1	5	0	1¼	..	1	6
Alexandria … ,,	0	6	..	1	6	0	5	..	2	0
SPERMACETI, refined ,,	1	4	..	0	0	1	3	..	1	4
American … ,,	1	3	..	0	0	1	0	..	1	1
SQUILLS … ,,	0	2	..	0	3	0	1½	..	0	3½

GUMS.

	1878.					1877.				
	£	s.		£	s.	£	s.		£	s.
AMMONIACI drop .. per cwt.	2	0	..	2	3	2	2	..	2	6
lump .. ,,	0	15	..	1	18	0	18	..	1	14
ANIMI, fine washed ,,	13	15	..	15	0	11	0	..	12	15
bold scraped ,,	13	2/6	..	13	10	9	15	..	10	15
sorts … ,,	8	12/6	..	11	15	6	15	..	9	10
dark … ,,	3	15	..	8	0	4	0	..	6	12/6
ARABIC, E.I., fine pale picked .. ,,	2	15	..	3	5	3	0	..	3	17
srts., md. to fin. ,,	2	2	..	2	14	2	5	..	2	14
garblings .. ,,	1	3	..	2	0	1	6	..	2	0
TURKEY, pick. gd. to fin. ,,	5	10	..	9	0	6	0	..	9	10
second & inf. ,,	3	5	..	5	5	3	0	..	5	15
in sorts .. ,,	2	5	..	2	7/6	2	10	..	3	16
Gedda … ,,	1	10/6	..	1	14	1	16	..	3	8
BARBARY, brown .. ,,	2	16	..	3	2	1	15	..	1	19
AUSTRALIAN … ,,	1	14	..	2	8	1	18/6	..	2	15
ASSAFŒTIDA, cm. to fin ,,	0	13	..	2	2	0	16	..	4	0
BENJAMIN, 1st & 2nd ,,	20	0	..	70	0	30	0	..	45	0
Sumatra 1st & 2nd ,,	7	0	..	14	12/6	6	10	..	12	0
3rd ,,	2	10	..	6	10	3	0	..	5	5
COPAL, Angola rod ,,	0	0	..	0	0	6	0	..	6	15
Benguela ,,	0	0	..	0	0	4	0	..	5	0
	s.	d.		s.	d.	s.	d.		s.	d.
Sierra Leone, per lb.	0	7½	..	0	10	0	6½	..	0	9
Manilla … per cwt.	18	0	..	23	6	21	0	..	27	0
DAMMAR, pale … ,,	72	6	..	75	0	75	0	..	77	6
Singapore … ,,	60	0	..	65	0	70	0	..	75	0
EUPHORBIUM … ,,	0	0	..	0	0	9	0	..	15	0
GALBANUM … per lb.	0	0	..	0	0	0	5	..	1	3
GAMBOGE, pckd. pipe per cwt.	210	0	..	275	0	190	0	..	250	0
GUAIACUM … per lb.	1	0	..	1	9	1	0	..	2	6
KINO … per cwt.	64	0	..	80	0	40	0	..	50	0
KOWRIE, rough .. ,,	37	0	..	48	0	24	0	..	39	0
scraped sorts ,,	49	0	..	55	0	40	0	..	55	0
MASTIC, picked … per lb.	3	0	..	3	6	4	0	..	5	0
MYRRH, gd. & fine per cwt.	150	0	..	200	0	152	6	..	240	0
ord. to fair … ,,	60	0	..	147	6	80	0	..	130	0
OLIBANUM, p. drop ,,	56	0	..	60	0	47	0	..	52	0
amber & ylw. ,,	40	0	..	53	0	34	0	..	46	0
garblings … ,,	20	0	..	35	0	10	0	..	25	6
SENEGAL … ,,	62	0	..	100	0	60	0	..	65	0
SANDARAC … ,,	62	0	..	90	0	79	0	..	100	0
SHELLAC, Orange .. ,,	63	0	..	82	0	83	0	..	96	0
Liver .. ,,	60	0	..	64	0	85	0	..	92	0
THUS … ,,	20	0	..	21	6	20	0	..	21	6
TRAGACANTH, leaf ,,	240	0	..	400	0	240	0	..	400	0
in sorts ,,	65	0	..	175	0	25	0	..	175	0

OILS.

	1878.					1877.				
	£	s.		£	s.	£	s.		£	s.
SEAL, pale … per tun	31	10	..	32	0	34	0	..	34	10
yellow to tinged ,,	28	0	..	31	0	31	10	..	33	0
brown … ,,	26	0	..	27	0	29	10	..	30	10
SPERM … ,,	65	0	..	0	0	80	0	..	0	0
BODY … ,,	0	0	..	0	0	0	0	..	0	0
COD … ,,	29	0	..	30	0	34	0	..	0	0
Oils, *continued*:—	£	s.		£	s.	£	s.		£	s.
WHALE, South Sea, pale, per tun	30	0	to	0	0	35	0	to	0	0
yellow ,,	29	0	..	0	0	33	0	..	34	0
brown ,,	24	0	..	28	0	30	0	..	31	0
East India, Fish ,,	0	0	..	0	0	25	10	..	26	0
OLIVE, Gallipoli … per ton	0	0	..	0	0	0	0	..	0	0
Gioja … ,,	0	0	..	0	0	0	0	..	0	0
Levant … ,,	0	0	..	0	0	49	0	..	49	10
Mogador … ,,	0	0	..	0	0	48	0	..	48	10
Spanish … ,,	48	0	..	0	0	49	10	..	50	0
Sicily … ,,	0	0	..	0	0	49	0	..	51	0
COCOANUT, Cochin .. ,,	65	0	..	0	0	43	10	..	44	0
Ceylon ,,	49	0	..	0	0	30	0	..	0	0
Mauritius ,,	48	0	..	0	0	0	0	..	0	0
GROUND NUT AND GINGELLY:										
Bombay …	0	0	..	0	0	0	0	..	0	0
Madras …	0	0	..	0	0	0	0	..	0	0
PALM, fine …	37	0	..	37	10	40	0	..	0	0
LINSEED …	27	5	..	0	0	30	10	..	0	0
RAPESEED, English, pale ..	34	0	..	0	0	40	10	..	0	0
brown …	32	0	..	0	0	33	5	..	0	0
Foreign, pale ..	0	0	..	0	0	0	0	..	0	0
brown …	0	0	..	0	0	0	0	..	0	0
COTTONSEED …	29	5	..	0	0	35	0	..	36	0
LARD …	40	0	..	42	0	52	0	..	0	0
TALLOW …	30	0	..	34	0	30	0	..	54	0
	s.	d.		s.	d.	s.	d.		s.	d.
TURPENTINE, American, cks.	22	6	..	22	9	26	6	..	0	0
French ,,	0	0	..	0	0	0	0	..	0	0
PETROLEUM, Crude …	0	0	..	0	0	0	0	..	0	0
refined, per gall.	0	7½	..	0	0	1	0½	..	1	0¾
Spirit	0	7¼	..	0	8¼	0	8½	..	0	9

SEEDS.

	1878.					1877.				
CANARY … per qr.	51	6	..	65	0	52	6	..	60	0
CARAWAY, English per cwt.	0	0	..	0	0	43	0	..	45	0
German, &c. …	32	0	..	36	0	48	0	..	49	0
CORIANDER …	16	0	..	21	0	22	0	..	26	0
HEMP … per qr.	35	0	..	40	0	0	0	..	0	0
LINSEED English ,,	60	0	..	63	0	0	0	..	0	0
Black Sea & Azof	49	0	..	0	0	57	0	..	0	0
Calcutta ,,	49	3	..	0	0	54	0	..	0	0
Bombay ,,	50	0	..	0	0	57	6	..	0	0
St. Petrsbrg. ,,	0	0	..	0	0	53	6	..	54	0
Mustard, brown .. per bshl.	14	0	..	17	0	0	0	..	0	0
white .. ,,	10	0	..	13	0	0	0	..	0	0
POPPY, East India, per qr.	52	0	..	55	0	57	6	..	0	0

SPICES.

	1878.					1877.				
CASSIA LIGNEA .. per cwt.	40	0	..	50	0	47	0	..	60	0
Vera … ,,	22	0	..	36	0	22	0	..	45	0
Buds … ,,	56	0	..	58	0	68	0	..	70	0
CINNAMON, Ceylon:										
1st quality … per lb.	1	8	..	3	6	2	1	..	3	8
2nd do. … ,,	1	6	..	2	6	1	10	..	2	10
3rd do. … ,,	1	5	..	1	11	1	9	..	2	5
Tellicherry … ,,	1	11	..	2	5	2	6	.	2	10
Chips … ,,	0	2¾	..	0	5½	0	3½	..	0	6¾
CLOVES, Penang … ,,	1	8	..	1	10	2	0	..	0	0
Amboyna … ,,	1	4	..	1	6	1	4	..	1	6
Zanzibar … ,,	1	2	..	1	3	1	1	..	1	2
GINGER, Jam., fine per cwt.	90	0	..	200	0	91	0	..	202	6
Ord. to good … ,,	53	0	..	80	0	62	0	..	90	0
African … ,,	21	0	..	22	0	26	0	..	27	0
Bengal … ,,	17	0	..	0	0	22	0	..	22	6
Malabar … ,,	0	0	..	0	0	26	0	..	28	0
Cochin … ,,	47	0	..	125	0	50	0	..	115	0
PEPPER, Blk, Malabar, per lb.	0	4⅓	..	0	5¼	0	4⅓	..	0	5
Singapore … ,,	0	3¾	..	0	3½	0	3⅜	..	0	3¾
White Tellicherry ,,	0	0	..	0	0	0	10	..	1	4
Cayenne … ,,	1	4	..	3	1	1	6	..	3	0
MACE, 1st quality .. ,,	1	9	..	2	7	2	4	..	3	6
2nd and inferior .. ,,	1	0	..	1	8	1	0	..	2	3
NUTMEGS, 78 to 60 to lb. ,,	3	9	..	5	0	3	10	..	4	6
90 to 80 ,, ,,	2	10	..	3	8	3	2	..	3	9
132 to 95 ,, ,,	1	10	..	2	9	2	2	..	3	1
PIMENTA …	0	4⅝	..	0	5	0	4½	..	0	4¾

VARIOUS PRODUCTS.

	1878.					1877.				
COCHINEAL—										
Honduras, black .. per lb.	2	2	..	2	6	2	2	..	2	7
,, silver .. ,,	2	2	..	2	4	2	1	..	2	2
,, pasty .. ,,	2	1	..	0	0	2	0	..	0	0
Mexican, black … ,,	2	1	..	0	0	2	0	..	2	2
,, silver … ,,	1	1½	..	0	0	1	9	..	1	10
Teneriffe, black .. ,,	2	1	..	3	0	1	10	..	2	10
,, silver .. ,,	2	2	..	2	4	2	0	..	2	2
SOAP, Castile … per cwt.	26	0	..	33	0	33	0	..	34	10
SOY, China … ,, gall.	2	6	..	0	0	2	1	..	0	0
TERRA JAPONICA—										
Gambier … per cwt.	17	3	..	17	6	20	0	..	20	6
Free cubes … ,,	24	0	..	27	0	21	0	..	21	9
Cutch … ,,	24	0	..	27	0	24	0	..	24	9
WAX, BEES, English ,,	£3	0	..	£3	5	£0	0	..	0	0
Jamaica … ,,	7	2/6	..	8	0	7	0	..	7	17/6
East India .. ,,	7	0	..	7	7/6	0	0	..	0	0
VEGETABLE, Japan ,,	2	17	..	2	19	2	6	..	2	7
WOOD, DYE, Bar … per ton	3	0	..	3	5	3	0	..	3	5
Brazil … ,,	0	0	..	0	0	14	0	..	20	0
Cam … ,,	18	0	..	30	0	18	0	..	32	0
Fustic, Cuba … ,,	0	0	..	0	0	8	0	..	8	10
Jamaica … ,,	7	5	..	8	0	5	15	..	6	0
LOGWOOD, Campeachy ,,	8	5	..	8	10	8	15	..	9	0
Honduras … ,,	6	15	..	6	17/6	6	10	..	6	15
St. Domingo … ,,	5	10	..	6	5	5	0	..	5	15
Jamaica … ,,	5	0	..	5	15	4	15	..	5	10
LIMA, first pile … ,,	9	0	..	10	10	9	0	..	10	0
RED SANDERS … ,,	6	10	..	6	12/6	6	10	..	0	0

The Poison Cupboard.

POISONING BY QUICKSILVER.—In Idria quicksilver is cked in bags made of dogskin, which is more impervious the globules than any other hide. When these bags are ptied the leather retains a considerable proportion of the tal. In Furth there are numerous mirror factories, and e emptied bags are, according to Dr. Fronmüller, somenes used for making socks, which cause chronic mercurial toxication. The hides are sometimes sold to glovers and ddlers, who, to free them as far as possible from the metal, anipulate them with their hands. Dr. Fronmüller has corded in the "Memorabilier" a case in which five persons ffered from acute mercurial poisoning, which attacked em after they had treated 98 of the quicksilver bags.

THE HUMOURS OF POISONING.—On August 29 a respectly-connected young lady was arrested at Maldon, Essex, a charge of stealing three pieces of ribbon from a draper's op. Next day the prosecutor asked to be allowed to ithdraw the charge on the ground that the prisoner was the habit of taking morphia, and that the theft was comitted while under its influence! The magistrates connted to the withdrawal!—On August 6 Mr. J. S. Slater, ntist, was charged at the Hanley Police Court with tempting to commit suicide. He had returned home a few ights before in a rather excited state, had vowed he would oison himself, had spread some arsenic on a piece of breadnd-butter, and retired to another room. His wife, in a ight, sent for the police, and the dentist was found retched on a sofa, and apparently at his last gasp! He as taken to the station, and a doctor had to be summoned efore it could be known that no poison had been taken. r. Slater said he had only intended to frighten his wife, ut was severely reprimanded by the Bench, and ordered to nd sureties.—On August 19 Rebecca Rayner was charged Lambeth with wilfully administering an overpowering nd noxious thing (ammonia), thereby endangering the life f Clara Hicks. Prisoner was in Rodney Road, Walworth, nd as prosecutrix came along prisoner tapped her on the houlder and told her to "Smell this," at the same time utting a bottle to her nose. She became insensible, and as so much affected that she was unable to attend on the rst hearing of the case. It was shown also that prosecutrix ad an succession of fits. Prisoner was discharged.

SOOTHING SYRUPS AND MOTHER'S FRIEND.—A pharmacist f Victoria, Australia, in a letter published in the *Australian edical Journal* for December, 1877, states that some very espectable monthly nurses "carry Godfrey's cordial with hem secretly when engaged in their calling." At one time hey bought it ready made, but now they prepare it themelves to avoid suspicion.

On August 13 a pauper, named Sarah Brewer, aged 63, n inmate of Bedwellting workhouse, stated that about 5 years before, when living at Kington, Herefordshire, she ad an illegitimate child, which she had poisoned with odfrey's cordial. Six years subsequently she married, and oisoned her second and third children in the same way, hen only a few weeks old. A doctor saw one of them, nd stated that it had died of inflammation of the lungs. he was detained for further inquiries, but nothing more as appeared in the papers.

On August 19 an inquest was held at Rugeley on the hild of Edmund Thursfield, aged 14 days. Soon after its birth a neighbour, Mrs. Hitchiner, gave it a quarter of a easpoonful of "The Mother's True Friend," made by Reade Brothers, of Wolverhampton. Dr. Freer, who was called in, stated that it died of inflammation of the lungs, accelerated by some narcotic poison.

On September 24 a coroner's jury, at South Featherstone, returned a verdict of guilty against Jane Newey for the manslaughter of her grandchild. For three weeks before its death she had given it, twice a day, one or two teaspoonfuls of a mixture consisting of a pennyworth each of laudanum, oil of aniseed, magnesia, arrowroot, essence of peppermint, and sugar, mixed with about 3 gills of water. Mr. Alexander Buncle, surgeon, Purston, who was called in to the child, gave it as his opinion that it had died from an overdose of laudanum. The *post mortem* revealed no disease, but the child, though two years old, weighed but nine pounds, and had never walked. It had been ailing from its birth. Mr. Buncle said, while giving his evidence, that when he saw her the child "was stupefied and almost pulseless." On September 28, at the West Riding Court, Jane Newey was charged with the manslaughter of her grandchild, and was remanded, bail in 100*l.* being accepted. We need hardly say that we have no leanings on either side. We may therefore protest against the use of the word "stupefied," which not only describes a condition, but assigns a cause to it. Mr. Buncle would have been right to say comatose or insensible, but to say "stupefied" prejudiced the jury in favour of poisoning. Adopting the highest estimate, the amount of laudanum administered cannot have exceeded eight minims a day, and was probably less.

On September 16 an inquest was held at Doncaster on a child named George William Peatman, who had died suddenly after taking a double dose of Hopper's Black Currant Cough Elixir, prepared by Mr. Charles Hopper, chemist, Market Place. The inquest was adjourned till September 23, for the mixture to be analysed. Mr. Scattergood, of Leeds, then stated that he had found a small quantity of morphia in the mixture, and that, having heard the evidence, he thought the child had died from an overdose of morphia. The bottle of cough mixture was not labelled "Poison," nor was it registered or stamped. Mr. F. Nicholson watched the case for the relatives of the deceased, and Mr. G. Heathcote represented Mr. Hopper and the Chemists and Druggists' Association of Great Britain.

NOTES AND QUERIES

R. L. G.—We do not know why you did not receive the packet in July. Either your application did not reach us, or reached us too late. This month the loss of a post, or delay in delivery, would have made your application too late.

H. T. (Belfast).—The materials used by dentists for stopping teeth are very numerous. Looking through the advertisement sheets of a single copy of a dental magazine, we find mentioned ten varieties of gold, three of amalgam and guttapercha, oxychloride of zinc (two kinds), stannous gold, and tinfoil. All these are used by dentists, but not for the same purposes. We do not think you want elaborate descriptions of the way in which all these are prepared; indeed, we could not find room for them. You had better apply to the nearest surgeon-dentist for instruction in the use of stopping.

Lime Juice and Glycerine.—Mr. S. Lawrence, Wavertree, at our request, has kindly rewritten the recipe which we printed incorrectly some time back, and which he says produces a perfectly homogeneous preparation.

White wax	½ oz.
Oil of sweet almonds	8 ozs.
Melt gently, and while still warm add	
Glycerine	1 oz.
Citric acid	33 grains
Dissolved in	
Rose water	3 ozs.
Alcohol	½ oz.
Ess. lemon	2 drachms
Oil of bitter almonds	4 drops

Mix by frequent shaking.

Small Printing Machines.—In reply to "M. A.," last month, we have received from Mr. W. S. Harvey, of Margate, specimens of printing done from one of Wightman's small presses, from which he says a person, when accustomed to the press, can produce about 200 impressions per hour. Mr. J. C. Akester, of 79 Hesse Road, Hull, has had practical experience with an "Albion" press, and sends us samples of its work. These samples are cleaner and better printing than the first mentioned, but we believe the latter are done from a much cheaper press. Mr. Akester recommends, however, the "Simplissimum" machine made by the Birmingham Machinists Company, or the "Model" made by Messrs. Squintani & Co., Ludgate Circus Buildings, London. These machines vary in price from 3*l.* 10*s.* to 10*l.* We have also received from Messrs. Zuccato & Wolff specimens of work done by the "Papyrograph," which process reproduces writing, drawings, &c., in *facsimile*. "Oxon" also writes:—"I have had hand-machines for seven years at work, and can do 400 per hour with a layer-on. I have seen most of the small presses in use; some of them are mere toys. The 'Excelsior' and 'Wightman' work easily, and will do counter bills."

Discoloured Whisky.—Mr. Alfred Sawden, 8 St. James's Street, S.W., writes:—"Seeing in your last issue that one of your correspondents, 'Alpha, York,' inquires for a method of removing iron from whisky, it struck me that perhaps it might be a similar case to one I had a few months ago. A sample of whisky was handed to me, which had the appearance of diluted ink. The first half of the cask was all right, but it had gradually gone darker in colour, until it was not at all presentable; hence it was requested to find out the reason and remove the impurity if possible. On making a preliminary examination, iron was easily detected. Before proceeding further, I mixed about 2 ounces with a little animal charcoal, and filtered. The result was perfectly satisfactory. I then mixed about 1 lb. of animal charcoal with 5 gallons, and filtered through paper; the result was beautifully clear and bright—taste, everything that could be desired. When I found the iron, I suspected the whisky had at some previous time been stored in an iron vat, and then probably decanted into a new oak cask, which might account for what to all appearance was tannate of iron. Providing, in the case of your correspondent, the iron is not so easily taken out, probably because existing in another form, would there be any objection to his adding tannic acid, q.s., and so precipitate the iron as tannate, a form that could be more easily removed?' '

Inquirer.—A L.R.C.P. is a physician, but strictly speaking he is not justified in assuming the title of doctor. A person with the L.R.C.P. and M.R.C.S. (Edin.) is, of course, both a physician and surgeon.

J. M.—We should suppose that something must have got mixed with your chromic acid to cause the effervescence you speak of when water or glycerine is added to it. Chromic acid should be in crystals of a brilliant crimson colour, which are very deliquescent, and dissolve readily in water, though alcohol causes a violent action. A form that has been published in this journal for a wart application orders 1 part of the acid to 3 parts of water.

E. J. B.—1. The most perfect method of deodorising alcohol for perfumery is to distil it from freshly-prepared wood charcoal, but filtration through the same is the process generally adopted. 2. *Peppermint Cordial.*—This is usually prepared by mixing peppermint-water and gin in equal proportions, and adding about 6 ounces of sugar to each pint. Cooley praises enthusiastically a preparation made (on the large scale) thus:

English oil peppermint	5 ozs.
Spirit of wine	3 pints

Agitate well in corked bottle, and transfer to cask with capacity of 100 gallons. Add flavourless proof spirit 36 gallons, and agitate for ten minutes. Then add 2¾ cwts. refined sugar in 35 gallons pure water; stir for 15 minutes. Then fill up with water containing 5 ounces alum, and agitate for another 15 minutes. Stand for a fortnight. Care should be taken that the ingredients are of the finest quality.

A. O.—It is not necessary that the indentures should be drawn up by a solicitor. The examination regulations only require a declaration that the candidate has been engaged for at least three years in the translation and dispensing of prescriptions.

Query.—"Are manufacturers of baking powder using alum liable to any penalty under the Food Adulteration Act?" It would be bold to say that analysts will not bring such a case forward, but with our present light we certainly can see very little chance of a successful prosecution in such an event.

Excelsior.—You will find full details of the subjects of examination, the best books to study, and useful hints, in Heyward's "Guide to the Matriculation," published at Manchester, price 6*d*. If you wish to know more than this gives, get the calendar of the London University from the secretary, price about 1*s*. 6*d*.

R. F. G.—You are, in our opinion, perfectly eligible for registration under the Dentists Act.

X. Y. (Ilkley).—The usual plan is to lay a piece of waxed paper over the blister, to be removed before use.

J. J. P. (Lichfield).—"Can anyone give me a recipe for dressing seed wheat to prevent rooks from taking it?"

Hy. O. Cramer (Liverpool).—Bauxite, or beauxite, is a mineral first found at Beaux, Dep. Bouches du Rhône, France, and now found also at Alloch, near Marseilles, and Calabria. Another variety, called also Wocheinite, is found at Wochein, in Carniola. This contains a larger proportion of alumina. It is a hydrate of alumina and iron, with silica and other variable ingredients, the proportion of bases varying much in different samples. This mineral forms a very excellent material for lining rotatory furnaces. It is calcined and mixed with 3 per cent. of argillaceous clay, or of silicate of soda and 6 per cent. of plumbago. This material is applied to the surface to be covered and heated until hardened. When exposed to an intense heat it becomes converted into a solid mass of emery, which steel tools can hardly touch, and the plumbago added makes the mass nearly infusible by reducing the iron contained in the bauxite. This mineral is used in the manufacture of Spence's patent alumino-ferric cakes as mentioned in our Paris Exhibition report in September; and although it contains neither carbonic acid nor sodium, it is used in the manufacture of soda. Balard heats it to redness with sodium sulphate, obtaining sodium aluminate and aluminum hydrate. The sodium aluminate is dissolved and decomposed by carbonic acid, yielding sodium, carbonate, and aluminum hydrate. The hydrate is dissolved in sulphuric acid to form aluminum sulphate. Another plan is to pass superheated steam over a mixture of bauxite and common salt, whereby sodium aluminate and hydrochloric acid are obtained. It is also used, both at Washington (the only aluminium manufactory in England) and in France, as the source of aluminium. When made from other materials, and especially cryolite, this metal contains traces of impurities which, though very small in amount, make it impossible to prepare from it the well-known aluminium bronze. That made from bauxite seems to be quite free from these impurities. Bauxite is not found in England, and we do not think England exports much of it. Mr. George G. Blackwell, of 5 Chapel Street, Liverpool, advertises that he is prepared to supply it, and can doubtless furnish you with a specimen.

Truth.—You would be, in our opinion, perfectly justified in claiming registration under the Dentists Act. The intention of the authors was certainly to give to all chemists who had been in the habit of conducting such minor dental business as tooth-drawing, &c., the opportunity of registering. It should be clearly understood that the Act does not render dental operations on the part of unregistered persons illegal. It simply confines the employment of the title "dentist," or any similar title, to registered persons. An unregistered person, too, would not be able to sue in a court of law for any fee or charge for any dental operation.

J. A.—See the foregoing reply.

Oxon.—A person 32 years of age, if otherwise eligible, can go through the pharmaceutical examinations. Formal apprenticeship is not necessary if the candidate has been three years practically engaged in the translation and dispensing of prescriptions. He will have to begin with the Preliminary examination.

How to Make Muc. Tragac. in Half a Minute.—"H. H.," Newferry, says:—"Many years ago I was an assistant to Drs. P. & H. The latter was very fond of ordering fresh mucilage of tragacanth for a certain class of his patients, and would frequently come in just as I wanted to go to my dinner and order three or four mixtures containing this blessed mucilage, and every tyro knows what a tedious job it is to rub up pulv. tragacanth with aq. pura. At length, wishing to get my dinner whilst it was warm I hit upon the following method, which saved me many an hour's rubbing afterwards: I put a small quantity of pulv. acaciæ into my dry mortar and rubbed it up with water into a thinnish mucilage; I then found I could rub in the pulv. tragacanth just as easily and as rapidly as I did the acaciæ and thus saved myself twenty minutes' or more trituration."

J. T. S.—There is no law to prevent a registered chemist, or anyone else calling himself "veterinary surgeon."

Alpha.—1. To get a clear oxymel of squills, we should consider it necessary in the first place to see that you have a pure honey, that is quite free from starch, and to strain it while hot through a linen bag. A water-bath is ordered, we presume, so as not to darken the honey. 2. The article to which we think you must refer is "Maw's Sauce Economiser," noticed by us in May, 1875. 3. Perhaps you would kindly send us the formula you have found so successful for lime juice and glycerine.

W. T. F. asks for information respecting the cause of "vinegar eels"—small creatures like eels frequently to be seen in vinegar, even when apparently of first-rate quality. Also, how to avoid or remedy them.

Errata.—(Educational Information last month).—The Calendar of the Pharmaceutical Society still states that the Preliminary examination is held on Mondays. We learn from an advertisement in the *Pharmaceutical Journal* that the day has been altered to Tuesday. A correspondent of ours, not knowing the new regulation, was refused entry to the examination, although he had sent in his name in time for the first *Monday* in October. We are informed that the fee for the Preliminary examination of the Irish Pharmaceutical Society (2 guineas) is wholly retained in case of failure, but the candidate may again present himself after six months without further payment. Candidates for the Pharmaceutical examination must produce a certificate of having served in dispensing and compounding for at least two years in the establishment of a pharmaceutical chemist or apothecary keeping open shop. The examination in Chemistry is always practical, and the fee is retained in cases of failure as in the Preliminary.

Try Again.—You cannot coat pills on the small scale so neatly as they can be done by the machinery of the wholesale makers. Repeated practice will, however, greatly improve your manipulation.

H. M. D.—Your case is perfectly clear. You were at the time of the passing of the Act engaged in the practice of dentistry in conjunction with pharmacy. Never mind whether you were an assistant or a master. You would be quite justified in signing the declaration.

Boutique.—"Sparkling Koumiss." We published a formula in November, 1875, which the *American Journal of Pharmacy* said was the Russian process:—A ferment is made by mixing two teacupfuls of wheat flour, one spoonful of honey, one of good beer yeast, and milk q.s. to form a paste not too thin. Put in moderately warm place to ferment, then transfer to linen bags, which hang in jar with 16lbs. of fresh mare's milk. Cover and let stand till the milk has acquired a pleasant acidulous taste (from 16 to 24 hours, according to temperature). Skim butter and cheese particles; pour into another keg. shake for an hour, and bottle; keep the bottles cool. "Boutique" also asks for a certain, speedy, and innocuous, dark-brown hair dye, pomade, or oil, or wash. Pomade or oil desired, as it is for a very young person, and must be used during life-time.